CMT-HX3/HX3R/HX5BT/ HX7BT

SERVICE MANUAL

Ver. 1.1 2007.06

US Model
CMT-HX7BT
Canadian Model
AEP Model
CMT-HX3/HX5BT
UK Model
Australian Model
CMT-HX5BT
E Model
CMT-HX3R/CMT-HX5BT
Russian Model
CMT-HX3R

- CMT-HX3/HX3R/HX5BT/HX7BT are composed of following models. As service manuals are issued for each component model, please refer to them.

COMPONENT MODEL NAME

	CMT-HX3	CMT-HX3R	CMT-HX5BT	CMT-HX7BT
Compact Disc Receiver	HCD-HX3		HCD-HX5	HCD-HX7
Speaker System	SS-CHX3		SS-CHX5	SS-CHX7

SPECIFICATIONS

Power requirements
US, Canadian model: 120 V AC, 60 Hz
Mexican model: 127 V AC, 60Hz
E, Chilean and Peruvian models: 120 – 127 V, 220 – 240 V AC, 50/60 Hz, adjustable with voltage selector
Other models: 220 – 240 V AC, 50/60 Hz
Power consumption: 40 watts
Dimensions (w/h/d) (excl. speakers):
Approx. 285 × 120 × 215 mm
Mass (excl. speakers): 2.6 kg
Supplied accessories: Remote Commander (1), R6 (Size AA) batteries (2), AM loop antenna (1), FM lead antenna (1), Speaker pads (8)

Design and specifications are subject to change without notice.

ACCESSORIES

Part No.	Description	Remark
1-480-119-11	COMMANDER, STANDARD (RM-SCR32) (incuding battery cover)	(HX7BT)
1-542-697-71	HEADPHONE (MDR-E706) (for BNP-1)	(HX3R: E, E51, AR)
1-754-102-41	ANTENNA, LOOP (LW.MW) (AM loop antenna)	
1-754-243-11	ANTENNA (FM lead anteanna)	
1-797-857-11	PLAYER, DIGITAL MUSIC (BNP-1)	(HX3R: E, E51, AR)
2-055-382-01	LID, BATTERY CASE (for RM-SCU35)	(HX3/HX3R/HX5BT)
3-081-834-21	BATTERY COVER (SMK7G) (for RM-SCR32)	(HX7BT)
3-095-514-11	MANUAL, INSTRUCTION (ENGLISH)	(HX3)
3-095-514-21	MANUAL, INSTRUCTION (FRENCH)	(HX3)
3-095-514-31	MANUAL, INSTRUCTION (SPANISH)	(HX3: AEP)
3-095-514-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN)	(HX3: AEP)
3-095-514-51	MANUAL, INSTRUCTION (SWEDISH, POLISH)	(HX3: AEP)
3-095-515-11	MANUAL, INSTRUCTION (ENGLISH)	(HX3R: E, E51, AR, RU)
3-095-515-21	MANUAL, INSTRUCTION (FRENCH)	(HX3R: E)
3-095-515-31	MANUAL, INSTRUCTION (SPANISH)	(HX3R: E, E51, AR, MX)
3-095-515-41	MANUAL, INSTRUCTION (RUSSIAN)	(HX3R: RU)
3-095-515-51	MANUAL, INSTRUCTION (UKRAINIAN)	(HX3R: RU)
3-095-517-11	MANUAL, INSTRUCTION (ENGLISH)	(HX7BT)
3-095-518-12	MANUAL, INSTRUCTION (ENGLISH)	(HX5BT: CND, SP, AUS)
3-095-518-22	MANUAL, INSTRUCTION (FRENCH)	(HX5BT: CND, SP)
3-095-518-31	MANUAL, INSTRUCTION (SPANISH)	(HX5BT: SP)
3-095-518-42	MANUAL, INSTRUCTION (TRADITIONAL CHINESE)	(HX5BT: SP)
3-095-518-51	MANUAL, INSTRUCTION (KOREAN)	(HX5BT: KR)
3-095-518-61	MANUAL, INSTRUCTION (ENGLISH)	(HX5BT: AEP, UK)
3-095-518-71	MANUAL, INSTRUCTION (FRENCH, SPANISH)	(HX5BT: AEP)
3-095-518-81	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN)	(HX5BT: AEP)
3-095-518-91	MANUAL, INSTRUCTION (SWEDISH, POLISH)	(HX5BT: AEP)
3-208-655-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, RUSSIAN) (for Digital Music Player)	(HX3R: E, E51, AR)
3-218-463-01	FOOT (8 pieces) (Speaker pads)	
A-1184-601-A	OVERALL ASSY (Remote Commander) (RM-SCU35) (incuding battery case lid)	(HX3/HX3R/HX5BT)

- Abbreviation:
AR : Argentina model
AUS : Australian model
CND: Canadian model
E51 : Chilean and Peruvian models
MX : Mexican model
RU : Russian model

MICRO HI-FI COMPONENT SYSTEM

9-887-617-02
2007F05-1
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Personal Audio Division
Published by Sony Techno Create Corporation

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2007.03	New
1.1	2007.06	Addition of Singapore model to CMT-HX5BT Addition of CMT-HX3R

HCD-HX3/HX5/HX7

SERVICE MANUAL

Ver. 1.2 2007.06

US Model
HCD-HX7
Canadian Model
AEP Model
E Model
HCD-HX3/HX5
UK Model
Australian Model
HCD-HX5

- HCD-HX3 (Canadian and AEP models) is the amplifier, USB, CD player and tuner section in CMT-HX3.
- HCD-HX3 (E, Mexican, Chilean, Peruvian, Argentina and Russian models) is the amplifier, USB, CD player and tuner section in CMT-HX3R.
- HCD-HX5 is the amplifier, bluetooth, USB, CD player and tuner section in CMT-HX5BT.
- HCD-HX7 is the amplifier, bluetooth, CD player and tuner section in CMT-HX7BT.

Note: Refer to supplement-2 for HCD-HX3 of CMT-HX3R.

Photo: HCD-HX3
(for CMT-HX3)

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Model Name Using Similar Mechanism		NEW
Base Unit Name	HCD-HX7	BU-K6BD90-WOD
	HCD-HX3: CND, AEP/HX5	BU-K6BD90U-WOD
	HCD-HX3: E, E51, MX, AR, RU	BU-K6BD91UR-WOD
Optical Pick-Up Block Name		KSM-213DCP

- Abbreviation

AR : Argentina model
CND : Canadian model
E51 : Chilean and Peruvian models
MX : Mexican model
RU : Russian model

SPECIFICATIONS

– HCD-HX7 –
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(The United States model only)
With 6 ohm loads, both channels driven, from 120 – 10,000 Hz; rated 50 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

Amplier section

– HCD-HX7 –
Continuous RMS power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Inputs:
AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms
Outputs:
PHONES (stereo mini jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 6 ohms

– HCD-HX5 –
Canadian, Australian, Korean models:
DIN power output (rated): 60 + 60 watts (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 75 + 75 watts (4 ohms at 1 kHz, 10% THD)

European model:
DIN power output (rated): 60 + 60 watts (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 75 + 75 watts (4 ohms at 1 kHz, 10% THD)
Music power output (reference): 75 + 75 watts (4 ohms at 1 kHz, 10% THD)
Inputs:
AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms
(USB) port: Type A, maximum current 500 mA
Outputs:
PHONES (stereo mini jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 4 ohms

– HCD-HX3 –
Canadian model:
DIN power output (rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
European model:
DIN power output (rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Music power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Inputs:
AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms
(USB) port: Type A, maximum current 500 mA
Outputs:
PHONES (stereo mini jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 6 ohms

Bluetooth section (HCD-HX5/HX7)

Communication system:
Bluetooth Standard version 2.0
Output:
Bluetooth Standard Power Class 2
Maximum communication range:
Line of sight approx. 10 m[1)]
Frequency band:
2.4 GHz band (2.4000 GHz – 2.4835 GHz)
Modulation method:
FHSS
Compatible Bluetooth proles[2)]:
A2DP (Advanced Audio Distribution Profile)
AVRCP (Audio Video Remote Control Profile)
Supported codecs:
Receive: SBC (Sub Band Codec), MP3
Transmit: SBC (Sub Band Codec)

1) The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, antenna's performance, operating system, software application, etc.

2) Bluetooth standard proles indicate the purpose of Bluetooth communication between devices.

USB section (HCD-HX3/HX5)

Supported bit rate
MP3 (MPEG 1 Audio Layer-3): 32 – 320 kbps, VBR
ATRAC: 48 – 352 kbps (ATRAC3plus), 66/105/132 kbps (ATRAC3)
WMA: 32 – 192 kbps, VBR
AAC: 48 – 320 kbps
Sampling frequencies
MP3 (MPEG 1 Audio Layer-3): 32/44.1/48 kHz
ATRAC: 44.1 kHz
WMA: 44.1 kHz
AAC: 44.1 kHz

CD player section

System: Compact disc and digital audio system
Laser Diode Properties
Emission duration: continuous
Laser Output*: Less than 44.6µW
*This is output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section:
Tuning range
US, Canadian models: 87.5 – 108.0 MHz (100 kHz step)
Other models: 87.5 – 108.0 MHz (50 kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 ohms unbalanced
Intermediate frequency: 10.7 MHz

– Continued on next page –

COMPACT DISC RECEIVER

9-887-618-03
2007F05-1

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AM tuner section:
Tuning range
US, Canadian models:
530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
European model:
531 – 1,602 kHz (with 9 kHz tuning interval)
Other models:
530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,602 kHz (with 9 kHz tuning interval)
Antenna: AM loop antenna, external antenna terminal
Intermediate frequency: 450 kHz

General

Power requirements
US, Canadian models: 120 V AC, 60 Hz
Other models: 220 – 240 V AC, 50/60 Hz
Power consumption: 40 watts (HCD-HX3/HX7)
50 watts (HCD-HX5)
Dimensions (w/h/d) (excl. speakers):
Approx. 285 × 120 × 215 mm
Mass (excl. speakers): 2.6 kg (HCD-HX3/HX7)
2.7 kg (HCD-HX5)
Design and specications are subject to change without notice.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This is appliance is classied as a CLASS 1 LASER product. This is marking is located on the rear exterior.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

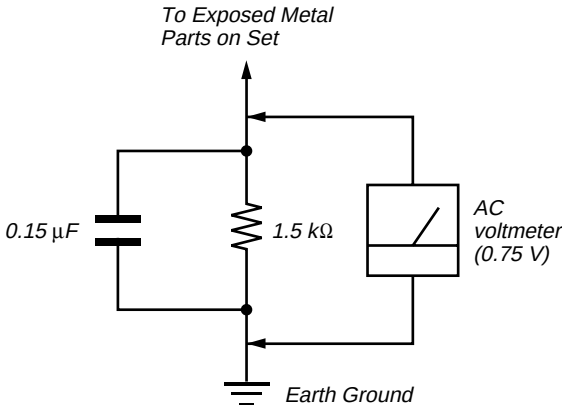

Fig. A. Using an AC voltmeter to check AC leakage.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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Refer to SUPPLEMENT-1 for the SWITCHING POWER and USB POWER boards of printed wiring board, schematic diagram and electrical parts list of HX5: Singapore model.
When repairing the set of except HX5: Singapore model, refer to either of original service manual/SUPPLEMENT-1 according to the set.

Refer to SUPPLEMENT-2 for the MAIN board of printed wiring board, schematic diagram and electrical parts list of HX5: Singapore model.
When repairing the set of except HX5: Singapore model, refer to either of original service manual/SUPPLEMENT-1 according to the set.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

RELEASING THE ANTITHEFT LOCK

The disc tray lock function for the antitheft of an demonstration disc in the store is equipped.

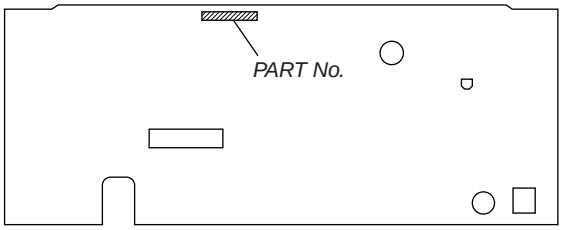
Releasing Procedure :

1. Press the I/⏻ button to turn the power on.
2. While pressing the ■/CANCEL button, press the ⏏ button until “UNLOCKED” displayed on the fluorescent indicator tube (around 5 seconds).

Note: When “LOCKED” is displayed, the antitheft lock is not released by turning power on/off with the I/⏻ button.

MODEL IDENTIFICATION

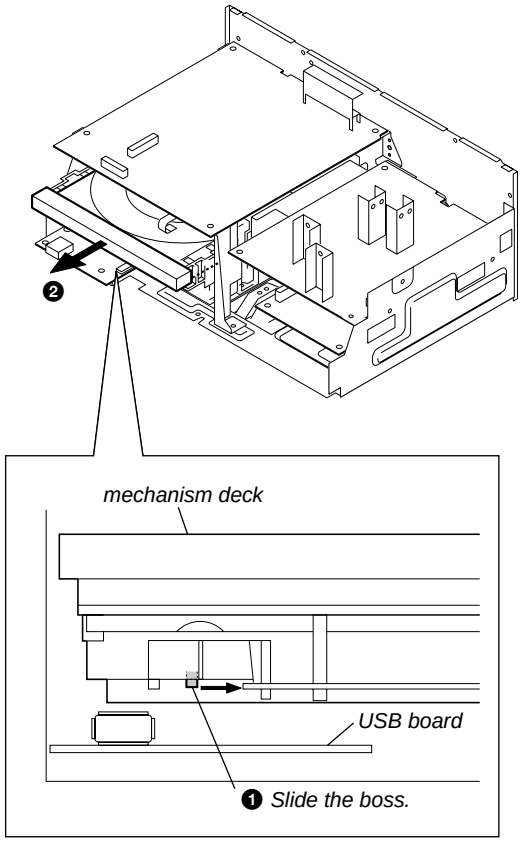
– Back Panel –



MODEL	PART No.
HX3: Canadian	2-895-161-0
HX3: AEP	2-895-161-1
HX5: Canadian	3-096-225-0
HX5: AEP, UK	3-096-225-1
HX5: Singapore	3-096-225-2
HX5: Australian	3-096-225-3
HX5: Korean	3-096-225-4
HX7	3-096-225-5

HOW TO OPEN THE TRAY WHEN POWER SWITCH TURN OFF

Note: Please resolve it to the state of the figure below referring to 3-2. Panel (Top) and 3-3. Front Panel Block of DISASSEMBLY.

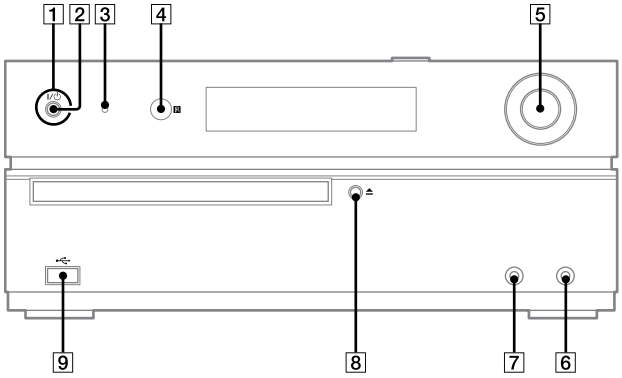


SECTION 2
GENERAL

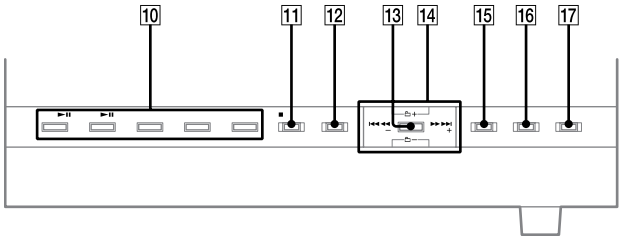
This section is extracted from instruction manual.

– HCD-HX3 –

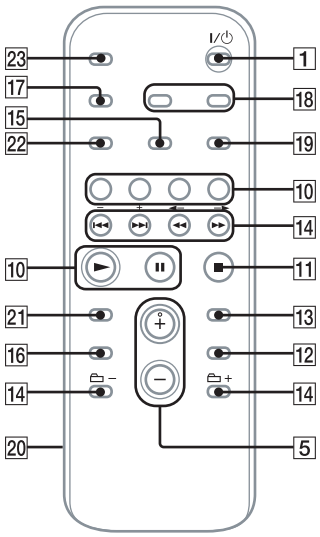
Front panel



Top panel



Remote (RM-SCU35)



1
I/⏻ (power) button
Press to turn on the system.

2
STANDBY indicator
Lights up when the system is turned off.

3
USB MEMORY indicator
Lights up when an optional USB device (Digital music player or USB storage media) is connected.

4
Remote sensor

5
Unit: VOLUME control
Remote: VOLUME +/– button
Turn or press to adjust the volume.

6
AUDIO IN jack
Connect to an optional audio component.

7
PHONES jack
Connect the headphones.

8
⏏ (open/close) button
Press to open or close the disc tray.

9
⇜ (USB) port
Connect to an optional USB device (Digital music player or USB storage media).

10
Playback buttons and function buttons
Unit: USB ►II (play/pause) button
Press to select the USB function.
Press to start or pause playback of an optional USB device (Digital music player or USB storage media).
Remote: USB button
Press to select the USB function.

Unit: CD ►II (play/pause) button
Press to select the CD function.
Press to start or pause playback of a disc.
Remote: CD button
Press to select the CD function.

Remote: ► (play) button, II (pause) button
Press to start or pause playback.

TUNER/BAND button
Press to select the TUNER function.
Press to select FM or AM reception mode.

Unit: AUDIO IN button
Press to select the AUDIO IN function.

FUNCTION button
Press to select the function.

11
Unit: ■/CANCEL (stop/cancel) button
Remote: ■(stop) button
Press to stop playback.
Press to cancel search.

12
SEARCH button
Press to enter or exit search mode.

13
ENTER button
Press to enter the settings.

14
I◄◄/►►I (go back/go forward) button
Press to select a track or file.
Unit: TUNE +/– (tuning) button
Remote: +/– (tuning) button
Press to tune in the desired station.
🗀 +/– (select folder) button
Press to select a folder.
◄◄/►► (rewind/fast forward) button
Press to nd a point in a track or file.

15
PLAY MODE/TUNING MODE button
Press to select the play mode of a CD, MP3 disc or an optional USB device (Digital music player or USB storage media).
Press to select the tuning mode.

16
Sound buttons
Unit: DSGX button
Remote: EQ button
Press to select the sound effect.

17
DISPLAY button
Press to change the information on the display.

18
CLOCK/TIMER SELECT button
CLOCK/TIMER SET button
Press to set the clock and the Play Timer.

19
REPEAT/FM MODE button
Press to listen to a disc, a single track or file repeatedly.
Press to select the FM reception mode (monaural or stereo).

20
Battery compartment lid

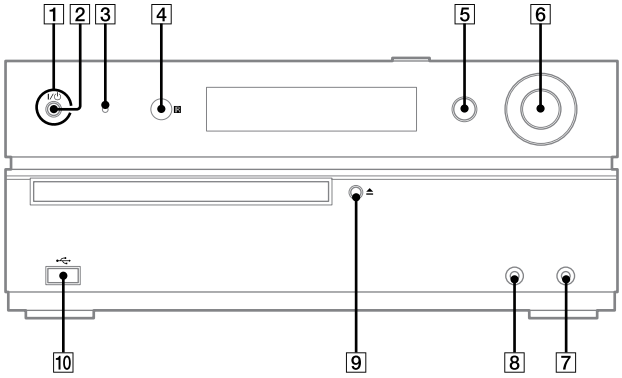
21
CLEAR button
Press to delete a pre-programmed track or file.

22
TUNER MEMORY button
Press to preset the radio station.

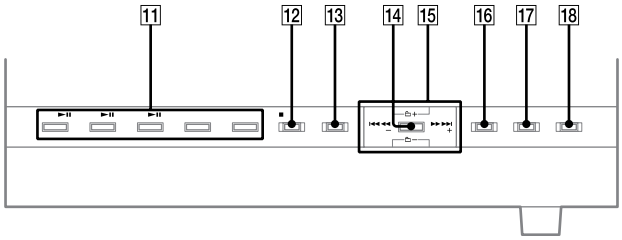
23
SLEEP button
Press to set the Sleep Timer.

– HCD-HX5 –

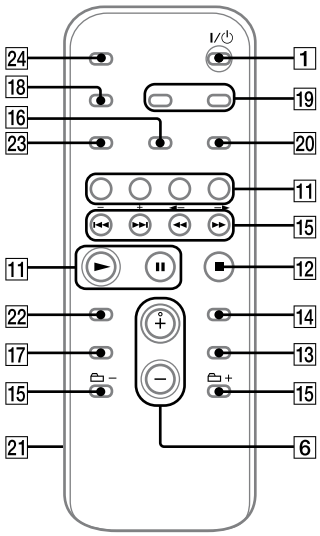
Front panel



Top panel



Remote (RM-SCU35)



1
I/⏻ (power) button
Press to turn on the system.

2
STANDBY indicator
Lights up when the system is turned off.

3
BLUETOOTH indicator
Lights up when the Bluetooth function is active.

4
Remote sensor

5
BLUETOOTH OPR button
Press to make a connection, disconnection, or pairing with a Bluetooth device.

6
Unit: VOLUME control
Remote: VOLUME +/– button
Turn or press to adjust the volume.

7
AUDIO IN jack
Connect to an optional audio component.

8
PHONES jack
Connect the headphones.

9
⏏ (open/close) button
Press to open or close the disc tray.

10
⇜ (USB) port
Connect to an optional USB device (Digital music player or USB storage media).

11
Playback buttons and function buttons
Unit: BLUETOOTH ▶II (play/pause) button
Press to select the Bluetooth function.
Press to start or pause playback of the music on the Bluetooth device (Bluetooth mobile phone, etc.).

Unit: USB ▶II (play/pause) button
Press to select the USB function.
Press to start or pause playback of an optional USB device (Digital music player or USB storage media).
Remote: USB button
Press to select the USB function.

Unit: CD ▶II (play/pause) button
Press to select the CD function.
Press to start or pause playback of a disc.
Remote: CD button
Press to select the CD function.

Remote: ▶ (play) button, II (pause) button
Press to start or pause playback.

TUNER/BAND button
Press to select the TUNER function.
Press to select FM or AM reception mode.

Unit: AUDIO IN button
Press to select the AUDIO IN function.

Remote: FUNCTION button
Press to select the function.

12
Unit: ■/CANCEL (stop/cancel) button
Remote: ■ (stop) button
Press to stop playback.
Press to cancel search.

13
SEARCH button
Press to enter or exit search mode.

14
ENTER button
Press to enter the settings.

15
I◀◀ /▶▶I (go back/go forward) button
Press to select a track or file.

Unit: TUNE +/– (tuning) button
Remote: +/– (tuning) button
Press to tune in the desired station.

+/– (select folder) button
Press to select a folder.

◀◀/▶▶ (rewind/fast forward) button
Press to find a point in a track or file.

16
PLAY MODE/TUNING MODE button
Press to select the play mode of a CD, MP3 disc or an optional USB device (Digital music player or USB storage media).
Press to select the tuning mode.

17
Sound buttons
Unit: DSGX button
Remote: EQ button
Press to select the sound effect.

18
DISPLAY button
Press to change the information on the display.

19
CLOCK/TIMER SELECT button
CLOCK/TIMER SET button
Press to set the clock and the Play Timer.

20
REPEAT/FM MODE button
Press to listen to a disc, a single track or file repeatedly.
Press to select the FM reception mode (monaural or stereo).

21
Battery compartment lid

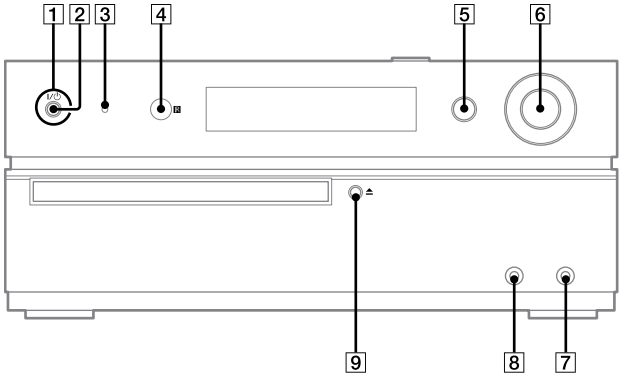
22
CLEAR button
Press to delete a pre-programmed track or file.
Press to erase the pairing registration information of the Bluetooth device.

23
TUNER MEMORY button
Press to preset the radio station.

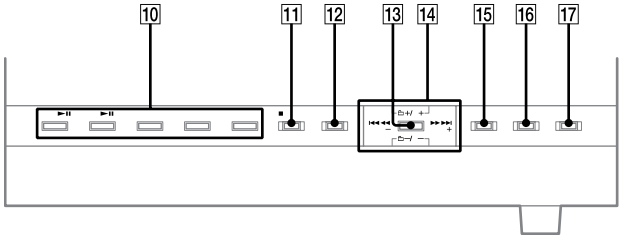
24
SLEEP button
Press to set the Sleep Timer.

– HCD-HX7 –

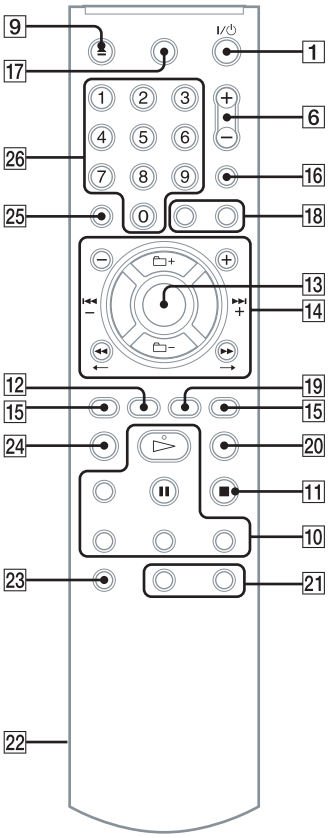
Front panel



Top panel



Remote (RM-SCR32)



1
I/⏻ (power) button
Press to turn on the system.

2
STANDBY indicator
Lights up when the system is turned off.

3
BLUETOOTH indicator
Lights up when the Bluetooth function is active.

4
Remote sensor

5
BLUETOOTH OPR button

Press to make a connection, disconnection, or pairing with a Bluetooth device.

6
Unit: VOLUME control
Remote: VOLUME +/– button
Turn or press to adjust the volume.

7
AUDIO IN jack
Connect to an optional audio component.

8
PHONES jack
Connect the headphones.

9
Unit: ⏏ (open/close) button
Remote: OPEN/CLOSE ⏏ button
Press to open or close the disc tray.

10
Playback buttons and function buttons
Unit: BLUETOOTH ►II (play/pause) button
Press to select the Bluetooth function.
Press to start or pause playback of the music on the Bluetooth device (Bluetooth mobile phone, etc.).

Unit: CD ►II (play/pause) button
Press to select the CD function.
Press to start or pause playback of a disc.
Remote: CD button
Press to select the CD function.

Remote: ◄ (play) button, II (pause) button
Press to start or pause playback.

TUNER/BAND button
Press to select the TUNER function.
Press to switch among FM, AM, XM and SIRIUS band.

AUDIO IN button
Press to select the AUDIO IN function.

FUNCTION button
Press to select the function.

11
Unit: ■/CANCEL (stop/cancel) button
Remote: ■(stop) button
Press to stop playback.
Press to cancel search.

12
SEARCH button
Press to enter or exit search mode.

13
ENTER button
Press to enter the settings.

14
I◄◄/►►I (go back/go forward) button
Press to select a track or file.

Unit: TUNE +/– (tuning) button
Remote: +/– (tuning) button
Press to tune in the desired station.

+/– (select folder) button
Press to select a folder.

Unit: CAT +/– (category) button
Remote: CATEGORY +/– button
Press to select a satellite radio category.

◄◄/►► (rewind/fast forward) button
Press to find a point in a track or file.

15
PLAY MODE/TUNING MODE button
Press to select the play mode of a CD or MP3 disc.
Press to select the tuning mode.

16
Sound buttons
Unit: DSGX button
Remote: EQ button
Press to select the sound effect.

17
DISPLAY button
Press to change the information on the display.

18
Satellite radio buttons
XM button
Press to select XM band.

SIRIUS button
Press to select SIRIUS band.

19
TUNER MEMORY button
Press to preset the radio station.

20
FM MODE button
Press to select the FM reception mode (monaural or stereo).

21
CLOCK/TIMER SELECT button
CLOCK/TIMER SET button
Press to set the clock and the Play Timer.

22
Battery compartment lid

23
SLEEP button
Press to set the Sleep Timer.

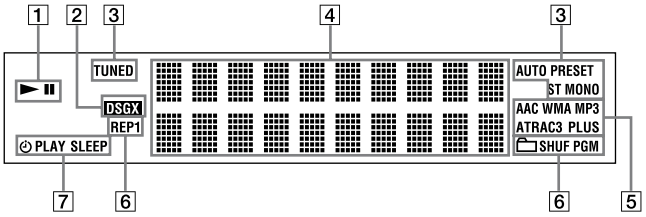
24
REPEAT button
Press to listen to a disc, a single track or file repeatedly.

25
CLEAR button
Press to delete a pre-programmed track or file.
Press to delete a SIRIUS Parental Lock password entry.
Press to erase the pairing registration information of the Bluetooth device.

26
Number buttons
Press to select a track, file or satellite channel.
Press to enter a SIRIUS Parental Lock password.
Press to enter a Bluetooth passcode.

– HCD-HX3 –

Information on the display



1
Play/Pause

2
DSGX

3
Tuner reception mode
Tuner reception

4
Text information

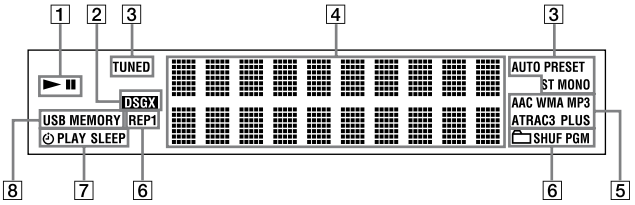
5
Audio format

6
Play mode

7
Timer

– HCD-HX5 –

Information on the display



1
Play/Pause

2
DSGX

3
Tuner reception mode
Tuner reception

4
Text information

5
Audio format

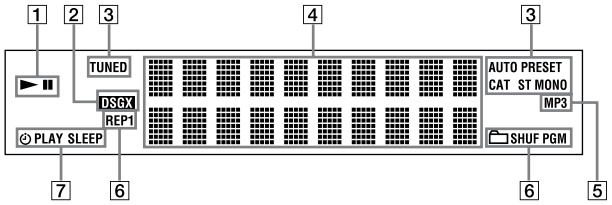
6
Play mode

7
Timer

8
USB MEMORY
Lights up when an optional USB device is connected.

– HCD-HX7 –

Information on the display



1
Play/Pause

2
DSGX

3
Tuner reception mode
Tuner reception

4
Text information

5
Audio format

6
Play mode

7
Timer

Setting the clock

Use buttons on the remote to set the clock.

1 Press I/⏻ to turn on the system.

2 Press CLOCK/TIMER SET.
If the current mode appears on the display, press ⏮/⏭ repeatedly to select "CLOCK SET?" and then press ENTER.

3 Press ⏮/⏭ repeatedly to set the hour, and then press ENTER.

4 Use the same procedure to set the minutes.
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

To display the clock when the system is off

Press DISPLAY. The clock is displayed for about 8 seconds.

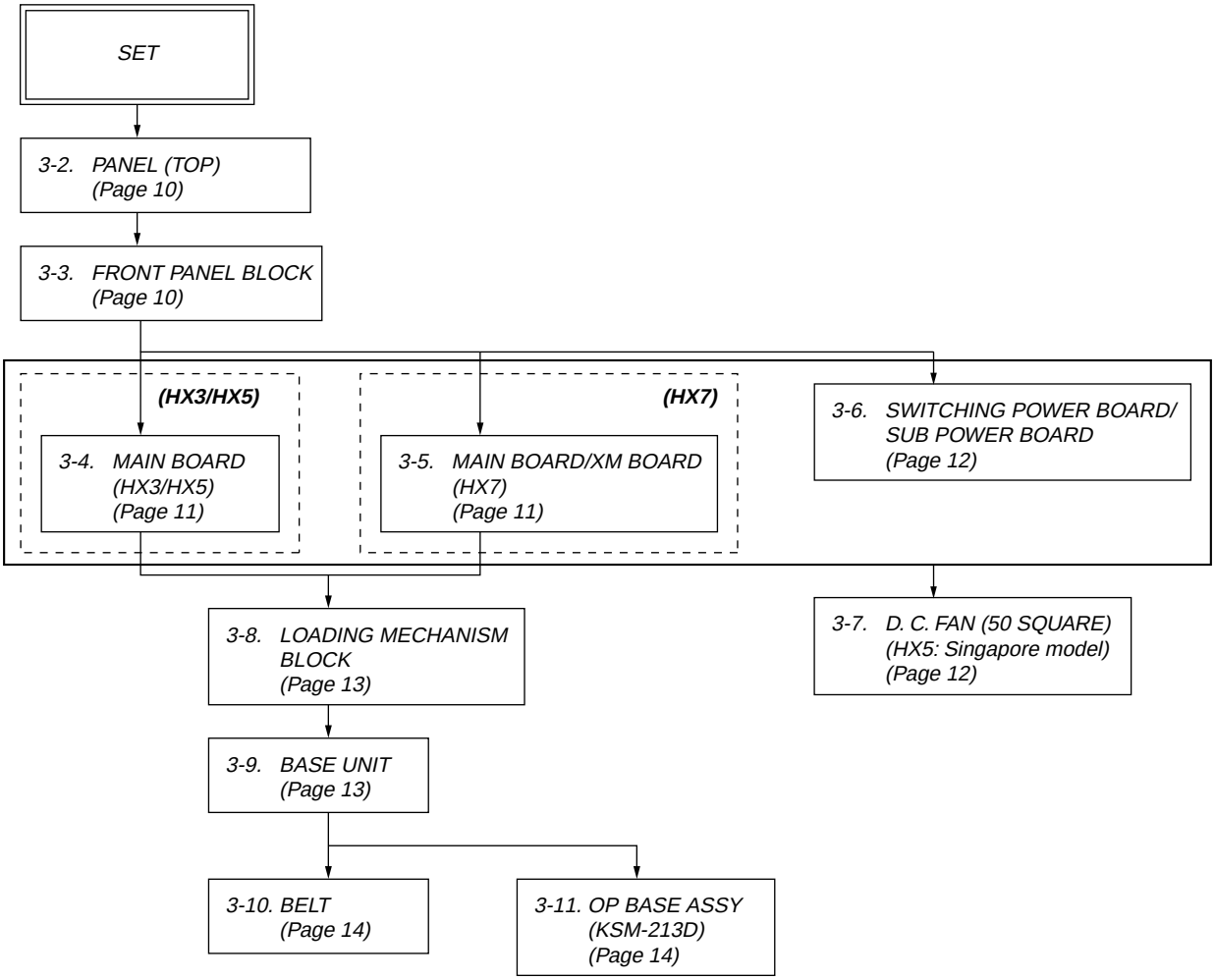
SECTION 3
DISASSEMBLY

- This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

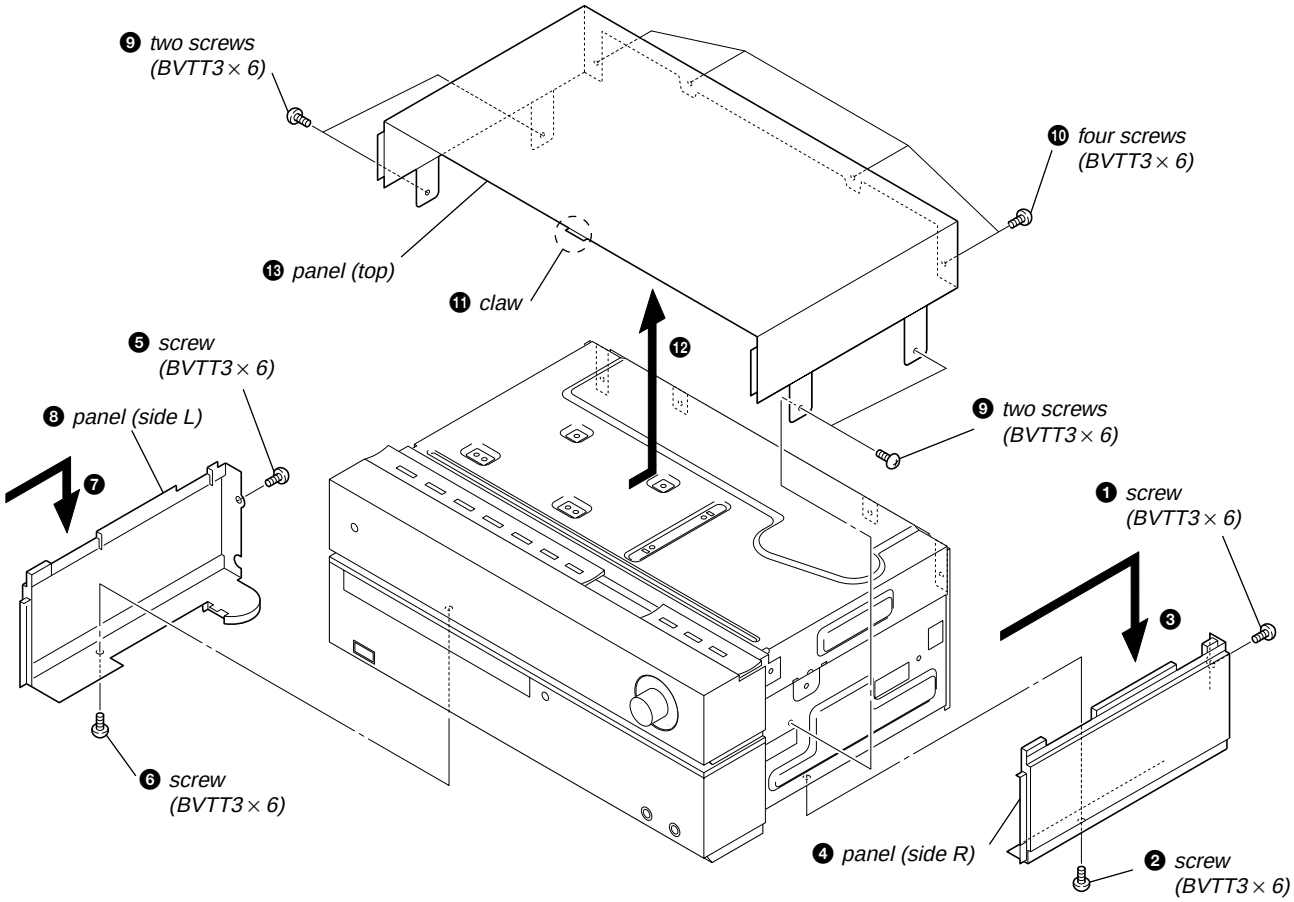
Note 1: *The process described in* ▣ *can be performed in any order.*

Note 2: *Without completing the process described in* ▣*, the next process can not be performed.*

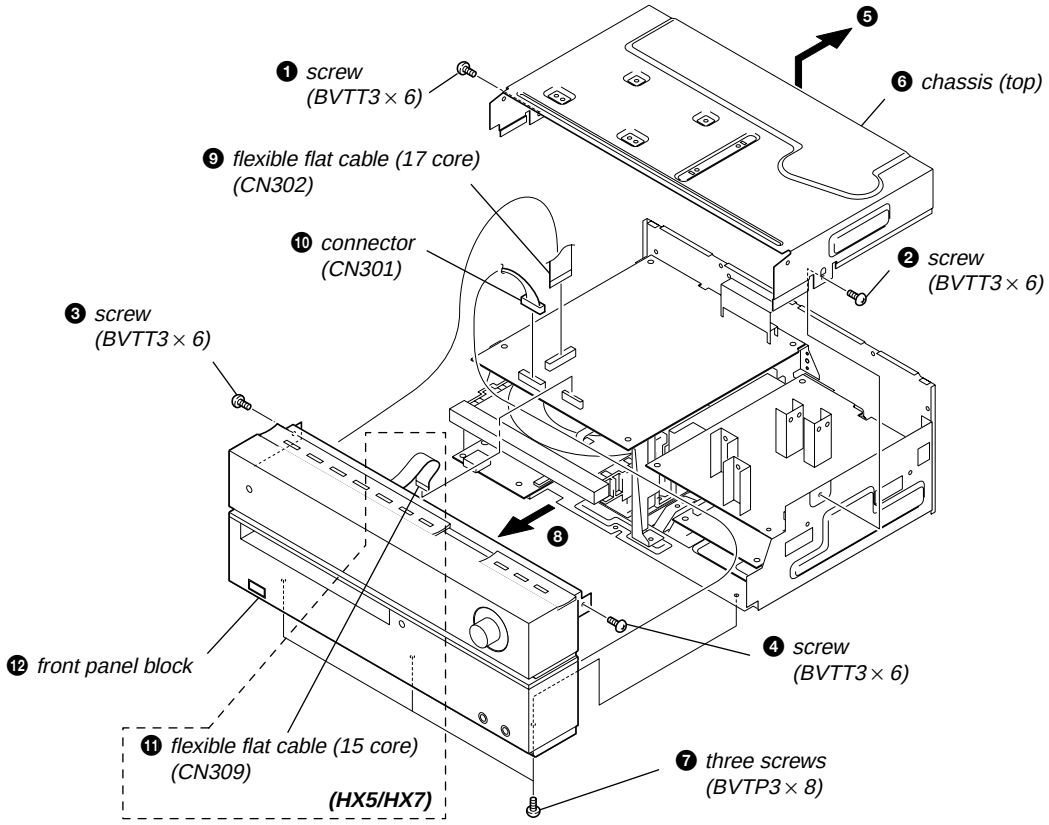


Note: Follow the disassembly procedure in the numerical order given.

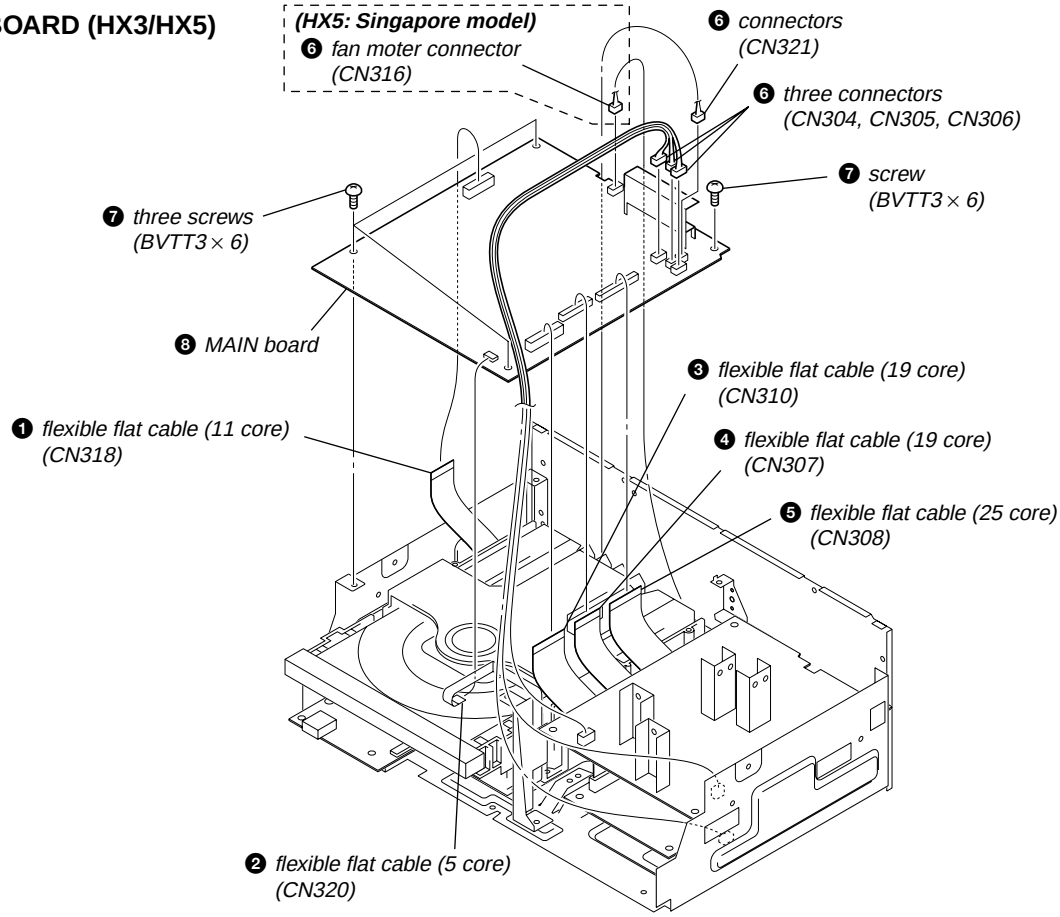
3-2. PANEL (TOP)



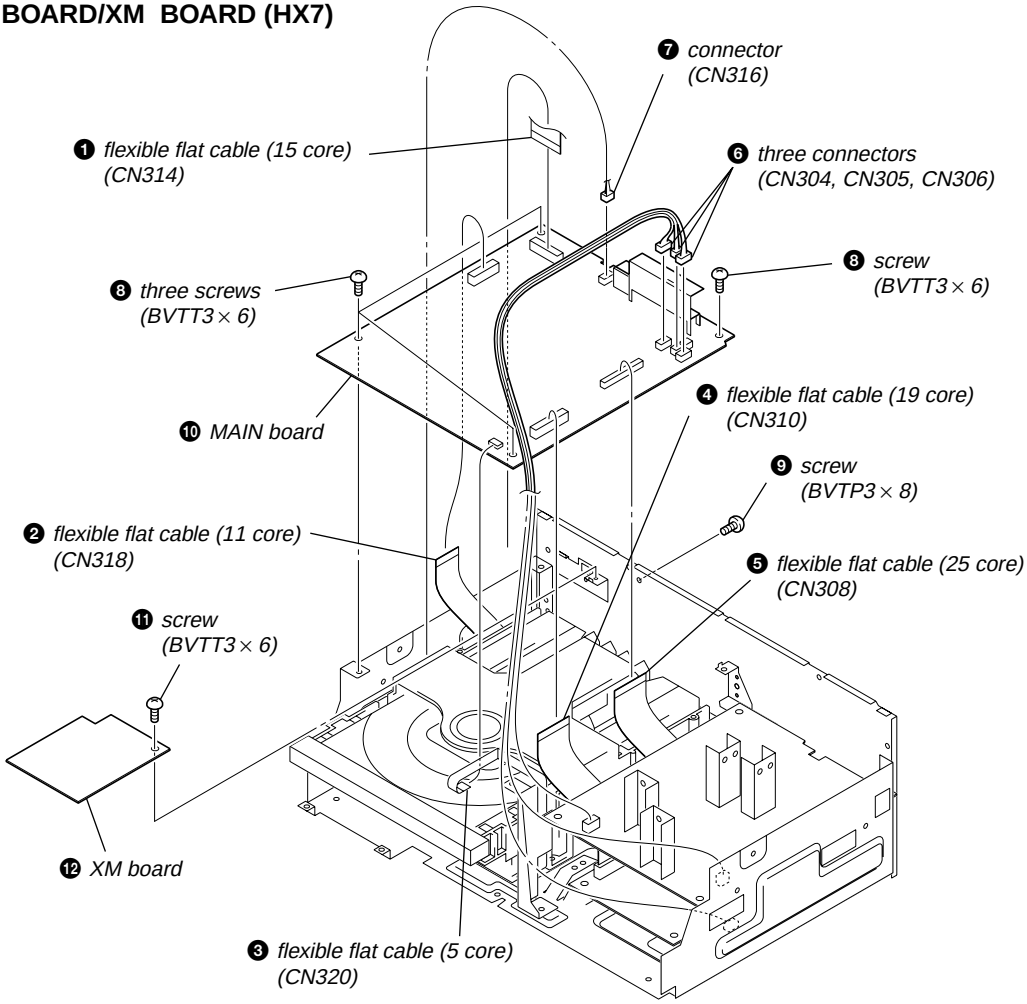
3-3. FRONT PANEL BLOCK



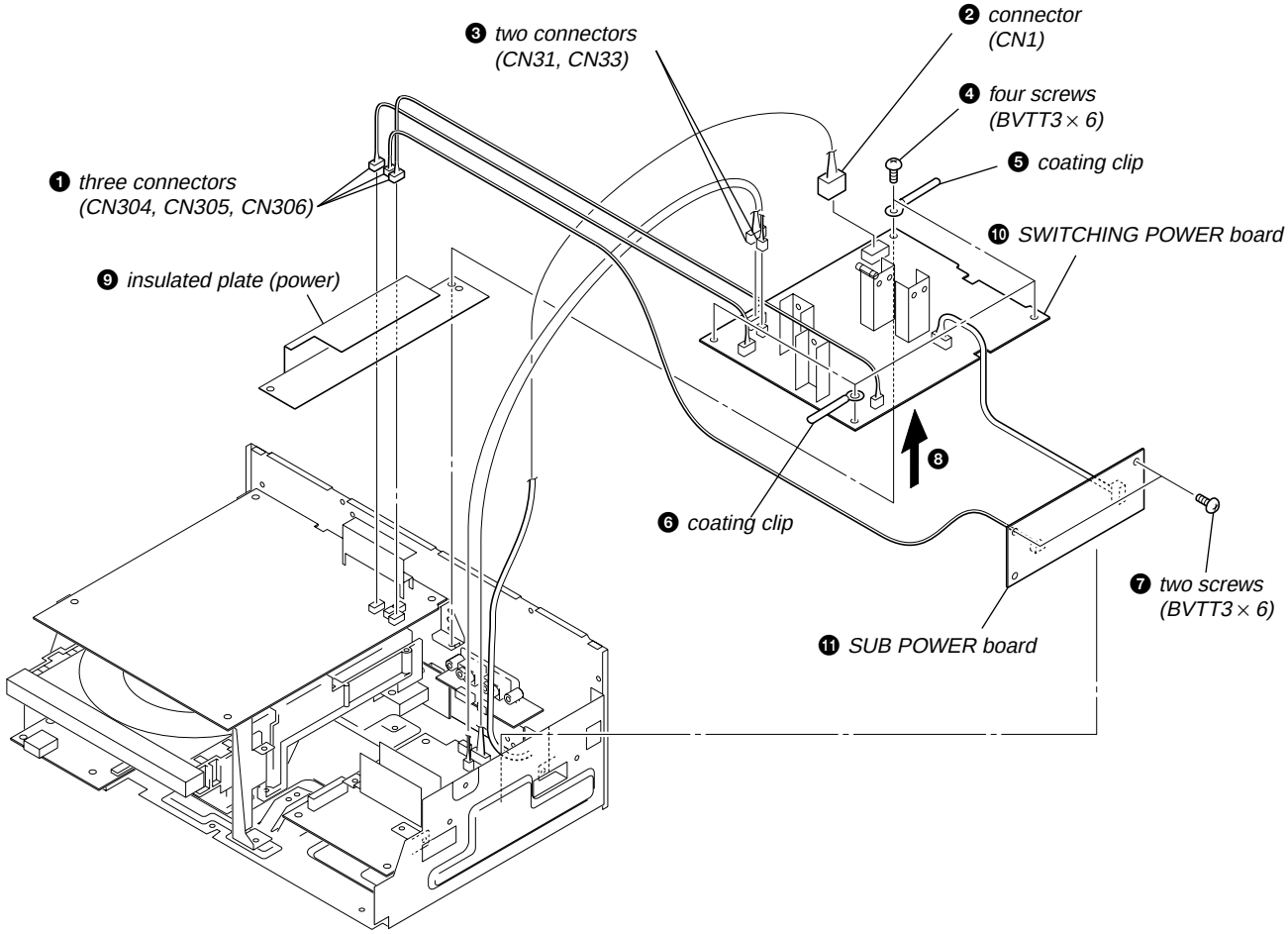
3-4. MAIN BOARD (HX3/HX5)



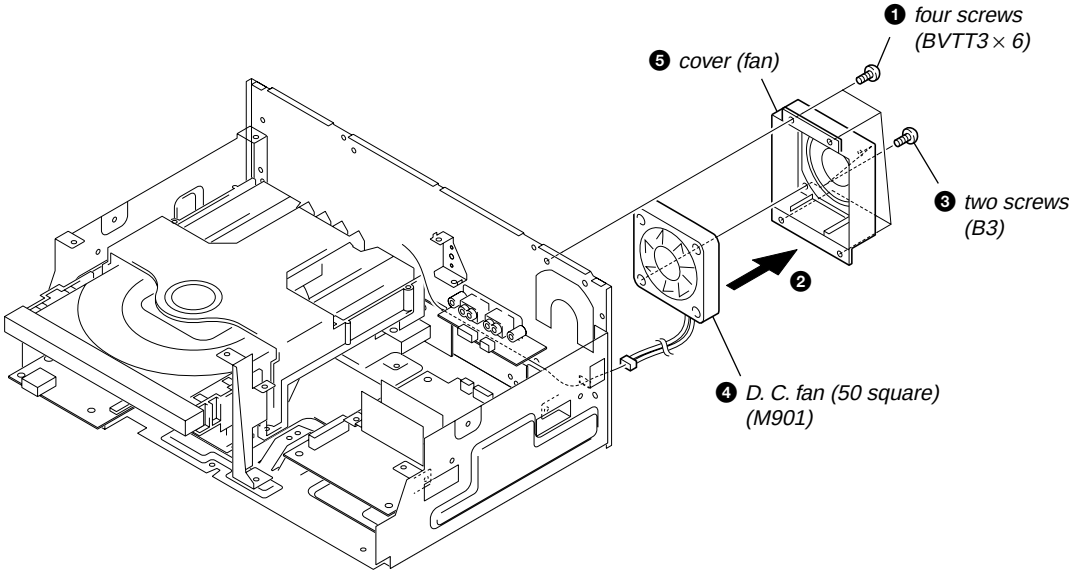
3-5. MAIN BOARD/XM BOARD (HX7)



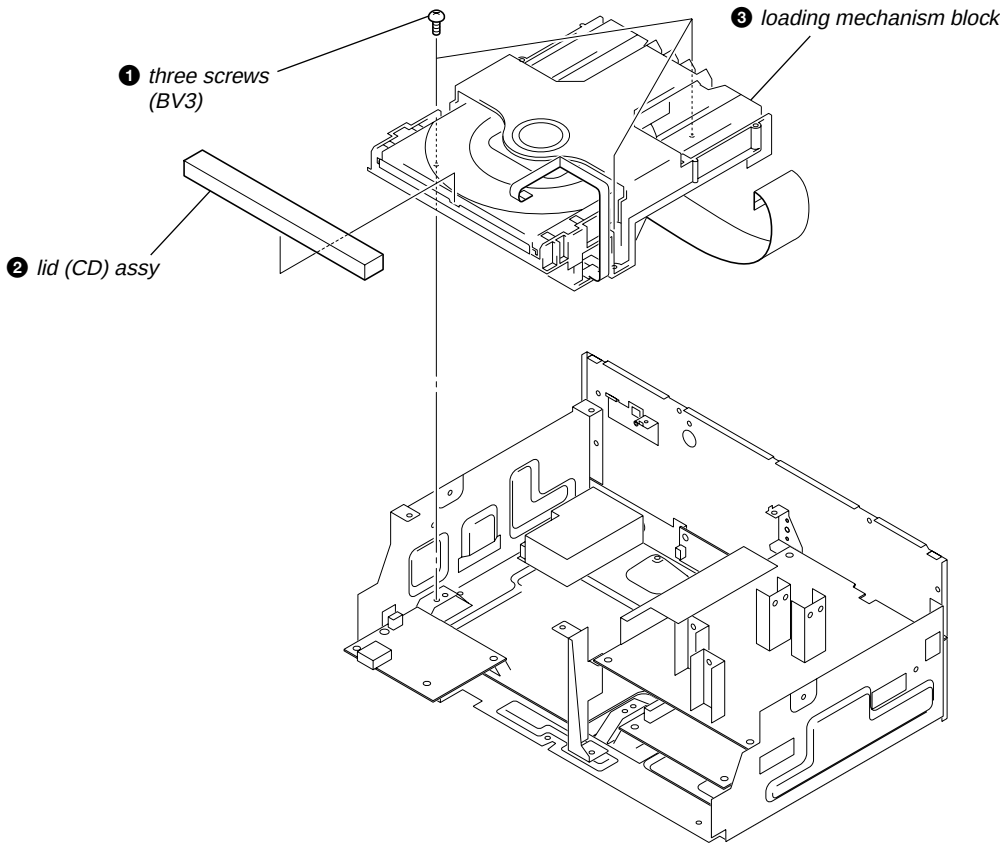
3-6. SWITCHING POWER BOARD/SUB POWER BOARD



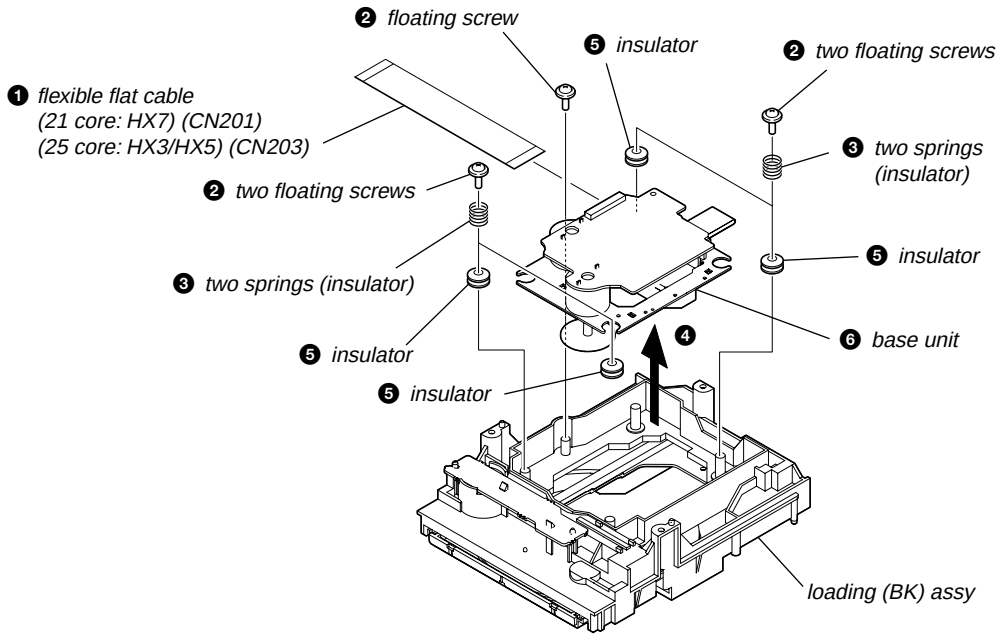
3-7. D. C. FAN (50 SQUARE) (HX5: Singapore model)



3-8. LOADING MECHANISM BLOCK

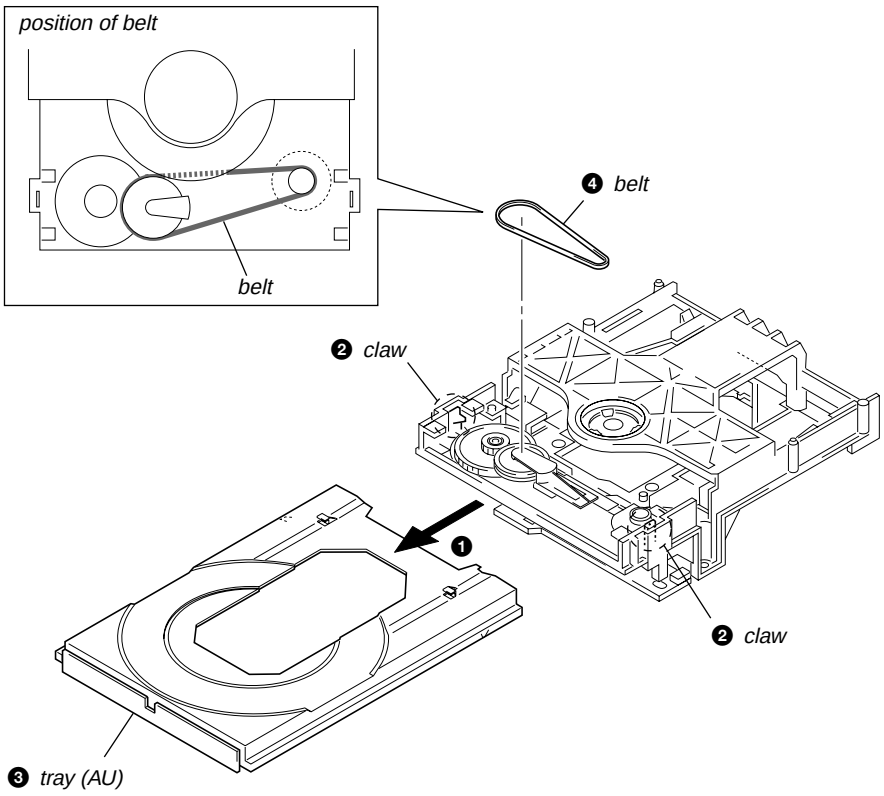


3-9. BASE UNIT

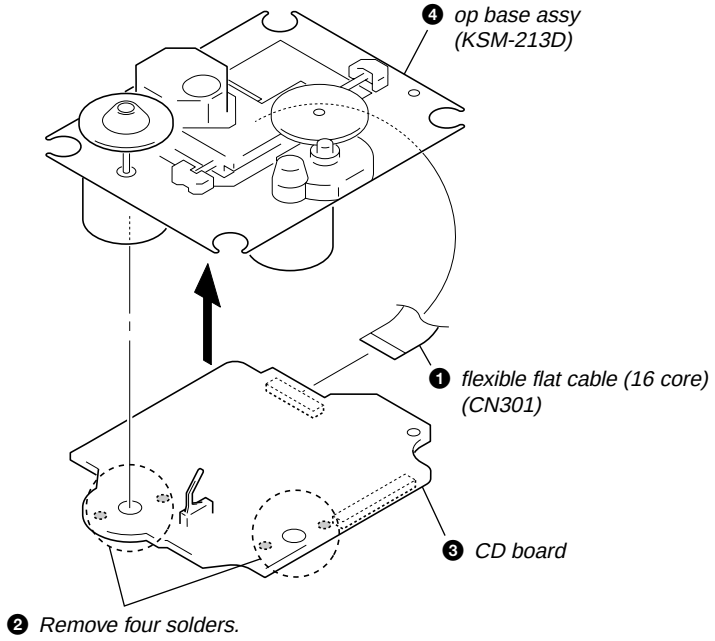


– Bottom view –

3-10. BELT



3-11. OP BASE ASSY (KSM-213D)



SECTION 4
TEST MODE

COLD RESET

The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons of [■/CANCEL], [DSGX] and [I/⏻] simultaneously.
2. The system is reset and becomes standby states.

COMMON TEST MODE

This mode is used to check operations of amplifier.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [■/CANCEL], [ENTER] and [⏏] simultaneously.
3. When the COMMON test mode is activated, "AUDIO IN" is displayed on the fluorescent indicator tube and "🕘 PLAY SLEEP" blink on the fluorescent indicator tube.
4. Each time [EQ] button on the remote commander is pressed, the display changes starting "TONE MAX", "TONE MIN" and "TONE FLAT" this order.
5. Turn the [VOLUME] knob counterclockwise, "VOLUME MIN" is displayed on the fluorescent indicator tube. Turn the [VOLUME] knob clockwise, "VOLUME MAX" is displayed on the fluorescent indicator tube.
6. To release this mode, press the [I/⏻] button.

PANEL TEST MODE

This mode is used to check the fluorescent indicator tube, LED, model, destination, software version and key.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [■/CANCEL], [DSGX] and [⏏] simultaneously.
3. All segments on the fluorescent indicator tube and [STANDBY] LED light up.
4. Press the [DSGX] button, the model and destination are displayed on the fluorescent indicator tube.
5. Press the [DSGX] button again, MC version is displayed on the fluorescent indicator tube.
6. Each time [DSGX] button is pressed, the display changes starting from MC version, GC version, USBL version (HX3/HX5 only), USBM version (HX3/HX5 only), BT version (HX5/HX7 only), CD version, CDD version, CDMA version, CDMB version, BDA version, BDB version, ST version, TA version and TM version this order, and returns to the MC version display.
7. When [SEARCH] button is pressed while the MC version is displayed, year, month and day of the software creation is displayed. When [SEARCH] button is pressed again, the display returns to the MC version display.
8. Press the [ENTER] button, the key test mode is activated and "K 0 V0" is displayed on the fluorescent indicator tube.
9. Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account. All keys are pressed, display becomes "K17" (HX3) or "K18" (HX5/HX7).
10. "V" value increases 2, 4, 6 ... if turn the [VOLUME] knob clockwise, or it decreases 8, 6, 4 ... if turn the knob counterclockwise
11. To release this mode, press three buttons in the same manner as step 2, or disconnect the power cord.

TUNER STEP CHANGE

(HX3: Canadian/HX5: Canadian, Australian, Singapore, Korean/HX7)

A step of AM tuning interval can be changed over between 9 kHz or 10 kHz.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [TUNER/BAND] button to select "AM".
3. Press the [I/⏻] button again to turn the power off.
4. Press two buttons of [TUNER/BAND] and [I/⏻] simultaneously.
5. The message "AM 9kHz Step" or "AM 10kHz Step" is displayed on the fluorescent indicator tube and thus the tuning interval is changed over.

CD SHIP MODE

This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select "CD" (HX3/HX7). Press the [CD] button on the remote commander to select "CD" (HX5).
3. Press two buttons of [SEARCH] and [I/⏻] simultaneously.
4. After the "STANDBY" display blinks, "LOCK" is displayed on the fluorescent indicator tube, and the ship mode is set.

CD SHIP MODE & MEMORY CLEAR

This mode is used to perform CD ship mode and cold reset simultaneously.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [SEARCH], [DSGX] and [I/⏻] simultaneously.
3. After the "STANDBY" display blinks, "LOCK" is displayed on the fluorescent indicator tube, the ship mode is set and the system is reset.

ANTITHEFT LOCK MODE

This mode is used to unable to take sample disc out of disc tray in the shop.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [⏏] button to open the disc tray and set the CD disc.
3. Press the [⏏] button to close the disc tray.
4. Press two buttons of [■/CANCEL] and [⏏] for 5 seconds.
5. The message "LOCKED" is displayed on the fluorescent indicator tube and the disc tray is locked. (Even if pressing the [⏏] button, the message "LOCKED" is displayed on the fluorescent indicator tube and the disc tray is locked)
6. To release from this mode, press two buttons of [■/CANCEL] and [⏏] for 5 seconds.
7. The message "UNLOCKED" is displayed on the fluorescent indicator tube and the disc tray is unlocked.

CD POWER MANAGE

This mode is used to changed over CD power on/off for decreasing of reception noise in the tuner mode.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select "CD" (HX3/HX7). Press the [CD] button on the remote commander to select "CD" (HX5).
3. Press the [I/⏻] button again to turn the power off.
4. Press two buttons of [■/CANCEL] and [I/⏻] simultaneously.
5. The message "CD POWER ON" or "CD POWER OFF"is displayed on the fluorescent indicator tube, and CD power on/off is changed over in the tuner mode.

CD SERVICE MODE

This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the I/⏻ button to turn the power on.
2. Press the FUNCTION button to select "CD" (HX3/HX7).
   Press the CD button on the remote commander to select "CD" (HX5).
3. Press three buttons of SEARCH, 🗀+ and ⏏ simultaneously, the message "SERVICE MODE" is displayed on the fluorescent indicator tube.
4. Press the 🗀– button to move the optical pick-up to inside track and the message "SLED IN" is displayed on the fluorescent indicator tube, or press the 🗀+ button to outside track and the message "SLED OUT" is displayed on the fluorescent indicator tube.
5. Press the DSGX button, "LD ON" or "LD OFF" is displayed on the fluorescent indicator tube. Each time DSGX button is pressed, laser diode on/off is changed over.
6. To release this mode, press the I/⏻ button.

BT TEST MODE

(HX5/HX7)

This mode is used to check the firmware version and address of bluetooth module.

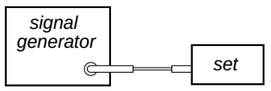
Procedure:

1. Press the I/⏻ button to turn the power on.
2. Press the FUNCTION button to select "BLUETOOTH" (HX7).
   Press the FUNCTION button on the remote commander to select "BLUETOOTH" (HX5).
3. Press three buttons of SEARCH, 🗀– and BLUTOOTH OPR simultaneously, the message "BT Test" is displayed on the fluorescent indicator tube. Then, the display is automatically changed to the firmware version of bluetooth module.
4. Press the DISPLAY button, address of bluetooth module is displayed on the fluorescent indicator tube.
5. To release this mode, press the I/⏻ button.

SECTION 5
ELECTRICAL CHECKS

TUNER SECTION

FM TUNE LEVEL CHECK



Procedure:

1. Turn on the set.
2. Input the following signal from signal generator to FM antenna input directly.

   Carrier frequency: A = 87.5 MHz, B = 98 MHz, C = 108 MHz

   Deviation : 75 kHz
   Modulation : 1 kHz
   ANT input : 35 dBu (EMF)

Note: Use 75 ohm coaxial cable to connect signal generator and the set.
You cannot use video cable for checking.
Use signal generator whose output impedance is 75 ohm.

3. Set to FM tuner function and tune A, B and C signals.
4. Confirm "TUNED" is lit on the display for A, B and C signals.

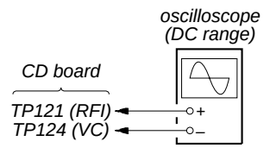
When the selected station signal is received in good condition, "TUNED" is displayed.

CD SECTION

Note:

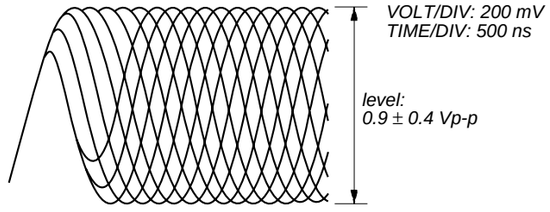
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

FOCUS BIAS CHECK



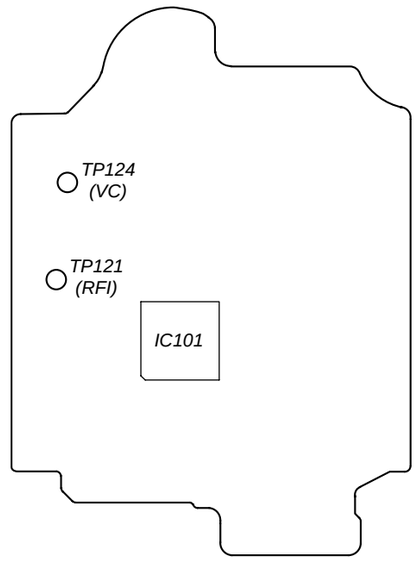
Procedure :

1. Connect oscilloscope to TP121 (RFI) and TP124 (VC) on the CD board.
2. Press the I/⏻ button to turn the power on, and press the ⏏ button to open the disc tray.
3. Set disc (YEDS-18) on the tray and press the CD ▶II button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.



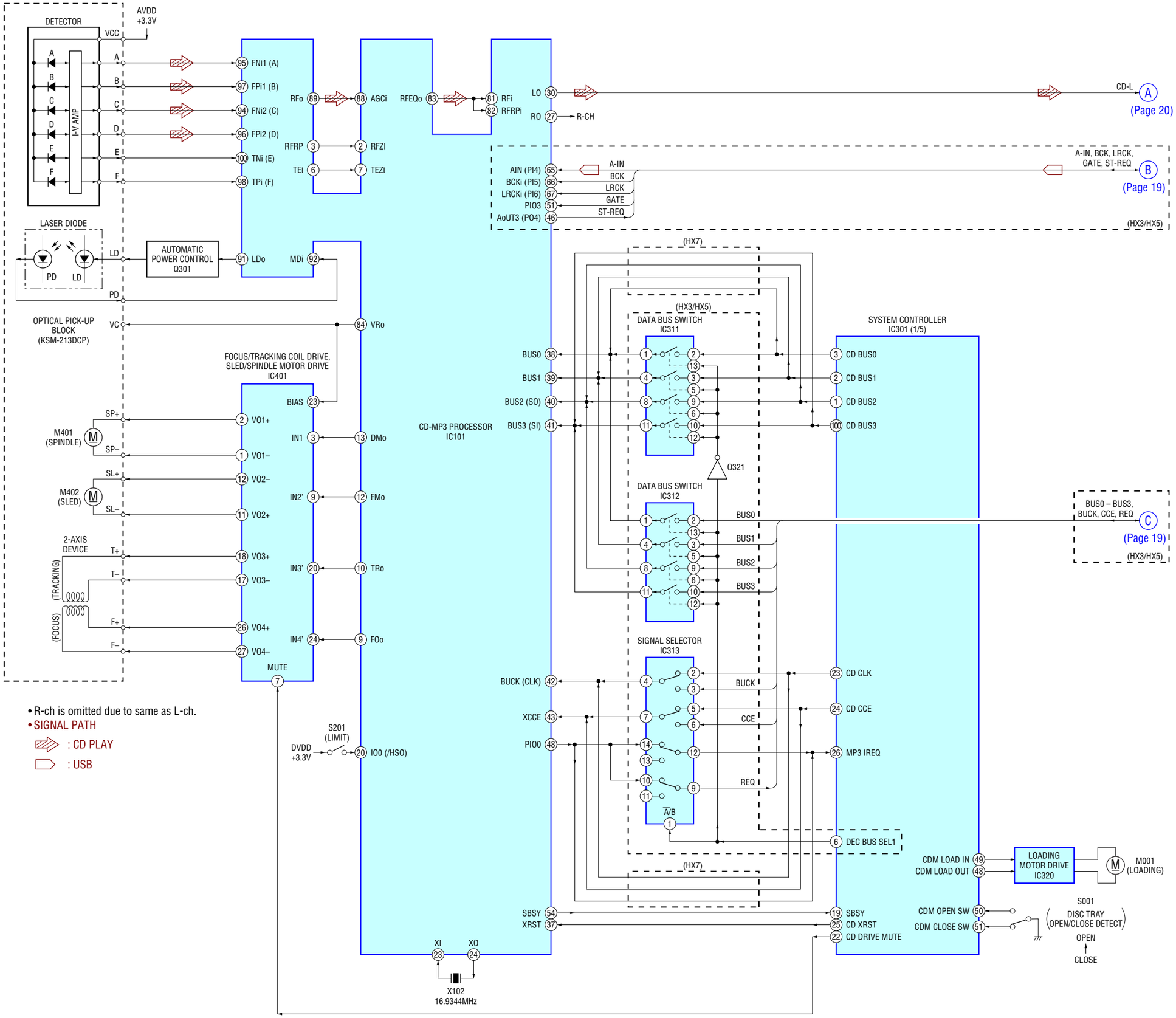
Checking Location:

– CD Board (Conductor Side) –



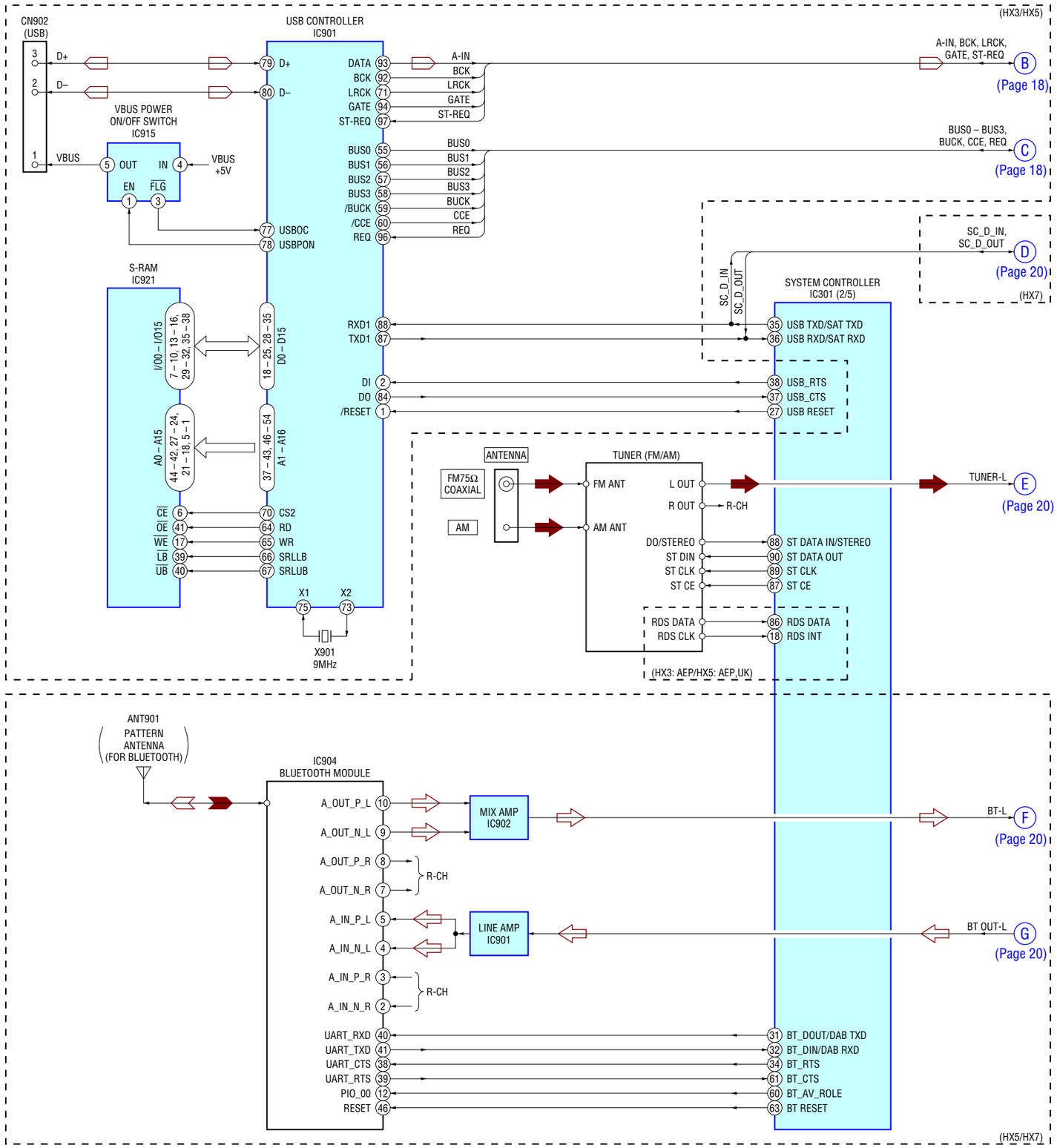
SECTION 6
DIAGRAMS

6-1. Block Diagram – CD SERVO Section –



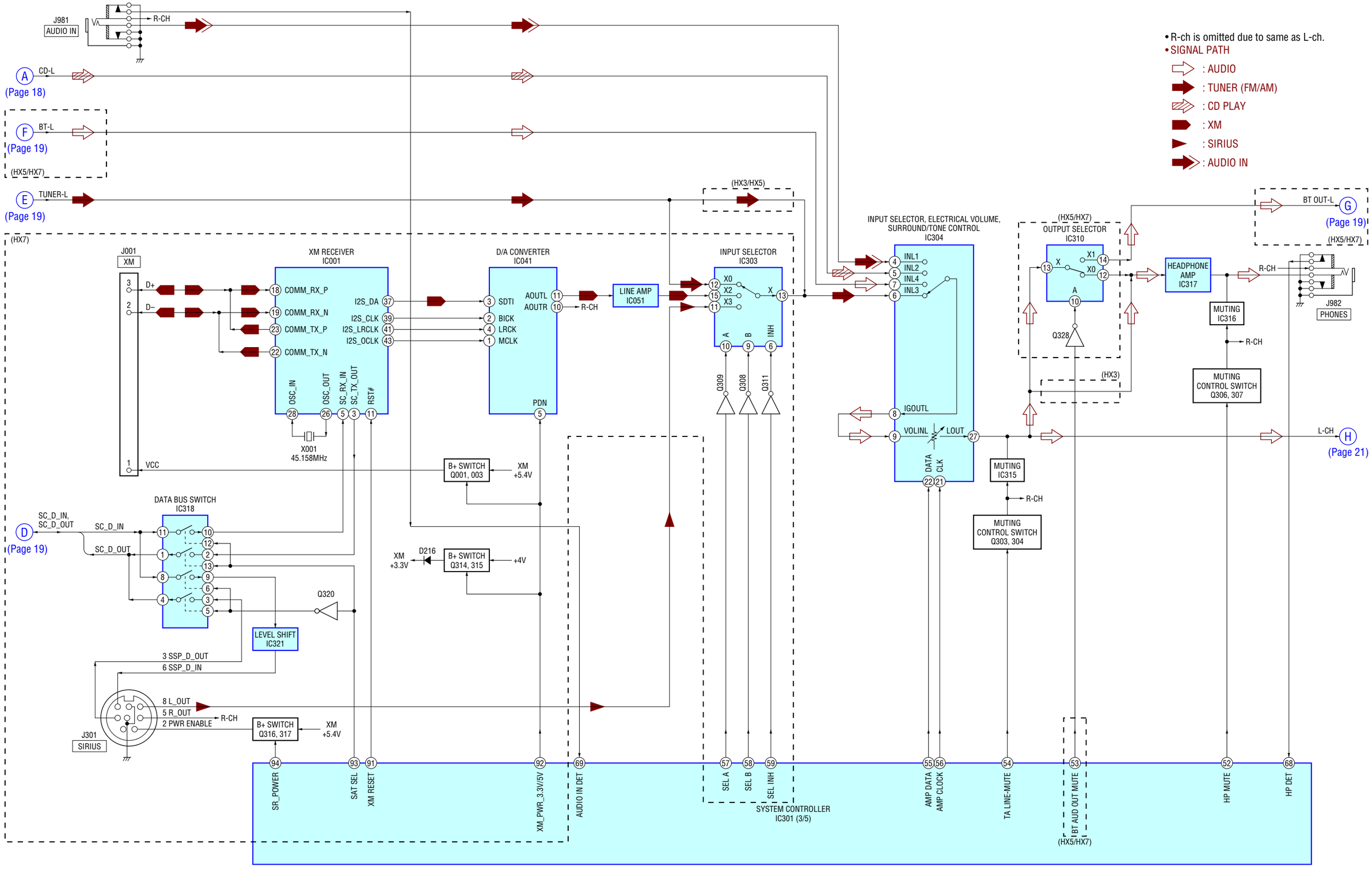
• R-ch is omitted due to same as L-ch.
• SIGNAL PATH
: CD PLAY
: USB

6-2. Block Diagram – TUNER/USB/BLUETOOTH Section –



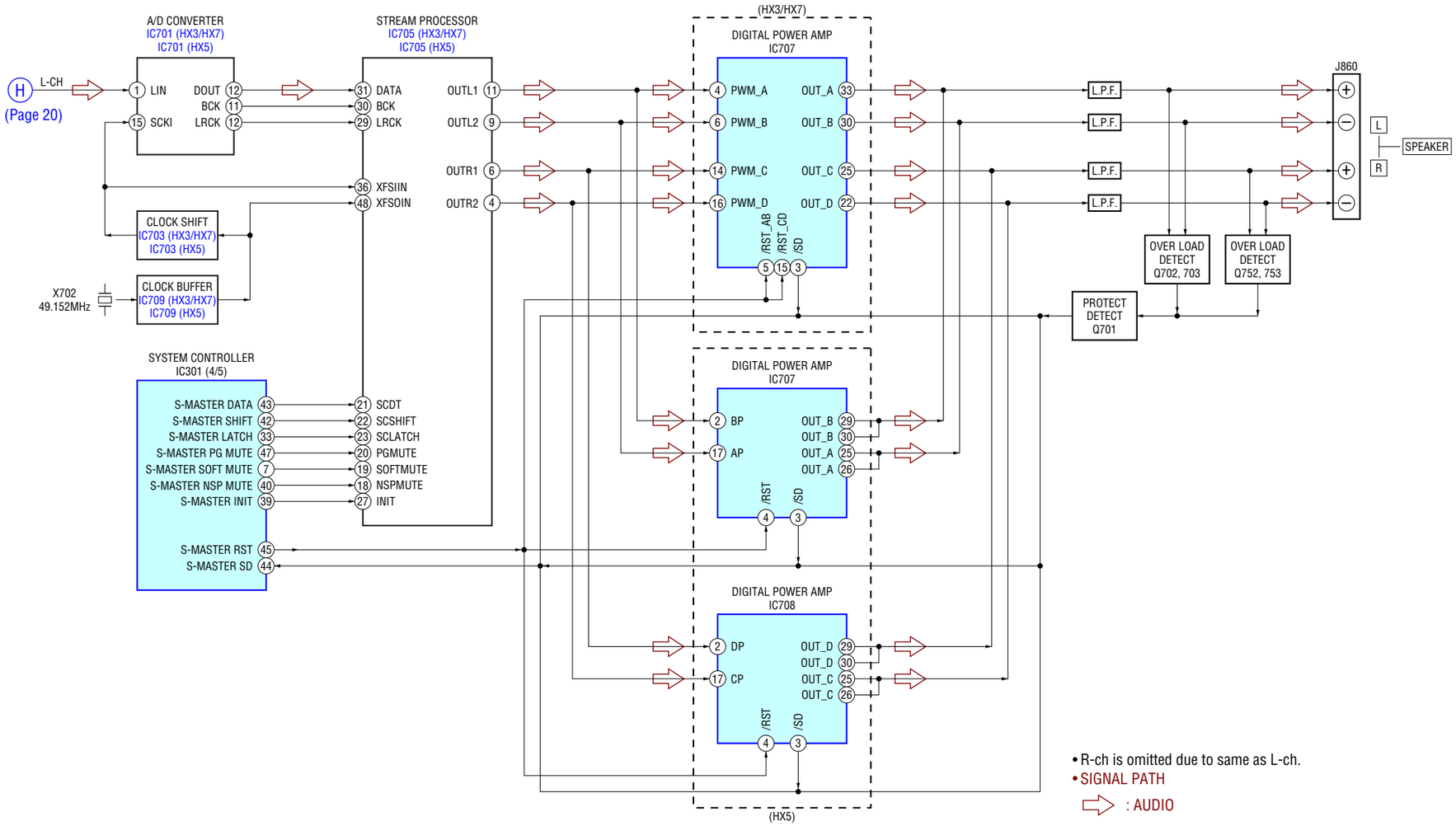
- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : AUDIO
  - : TUNER (FM/AM)
  - : USB
  - : BLUETOOTH IN
  - : BLUETOOTH OUT

6-3. Block Diagram – MAIN Section –



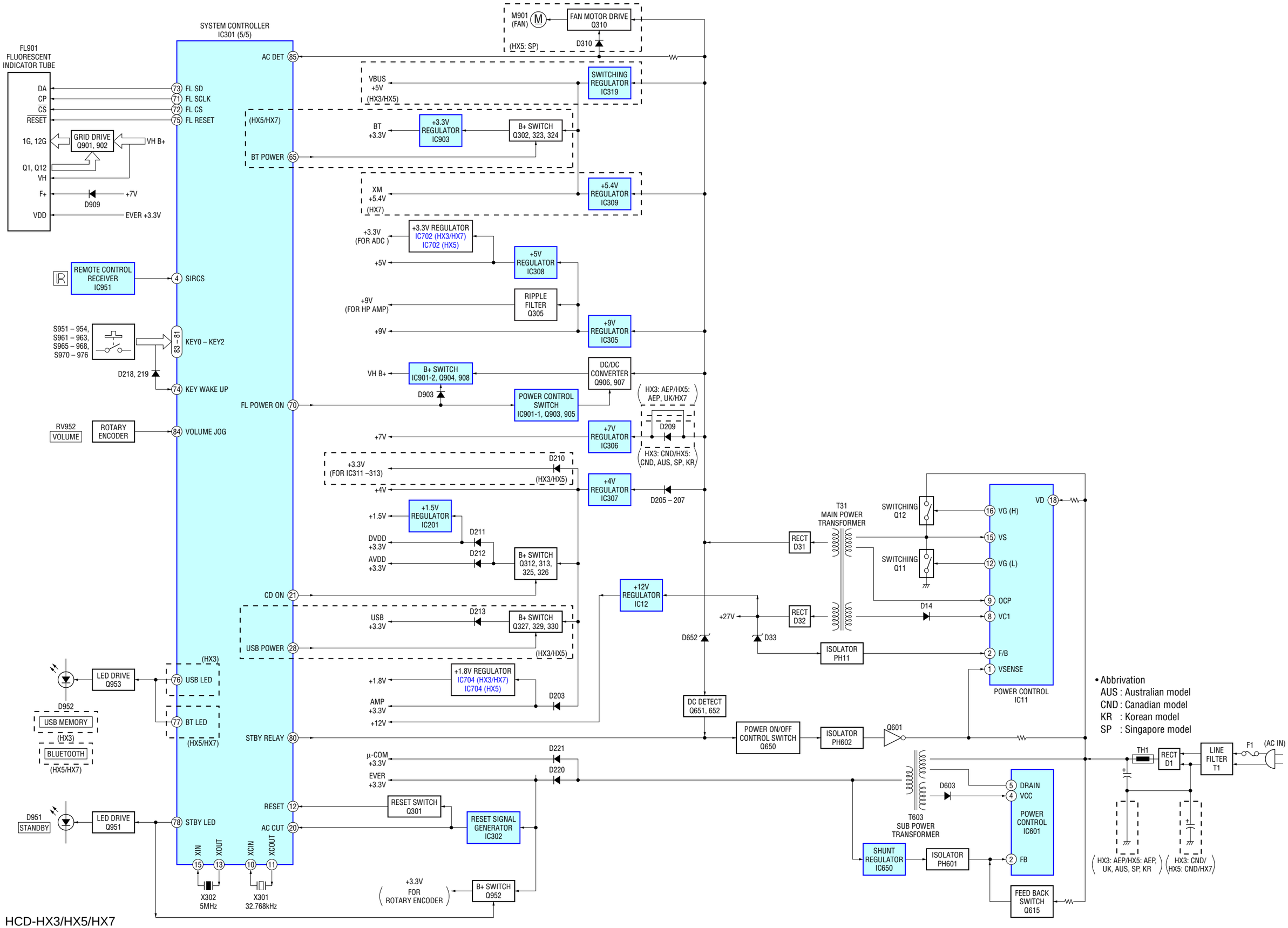
• R-ch is omitted due to same as L-ch.
• SIGNAL PATH
: AUDIO
: TUNER (FM/AM)
: CD PLAY
: XM
: SIRIUS
: AUDIO IN

6-4. Block Diagram – AMP Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  : AUDIO

6-5. Block Diagram – PANEL/POWER SUPPLY Section –



• Note For Printed Wiring Boards and Schematic Diagrams

Note on Printed Wiring Board:

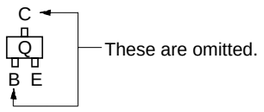
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

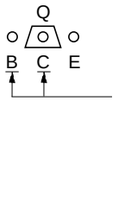
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor





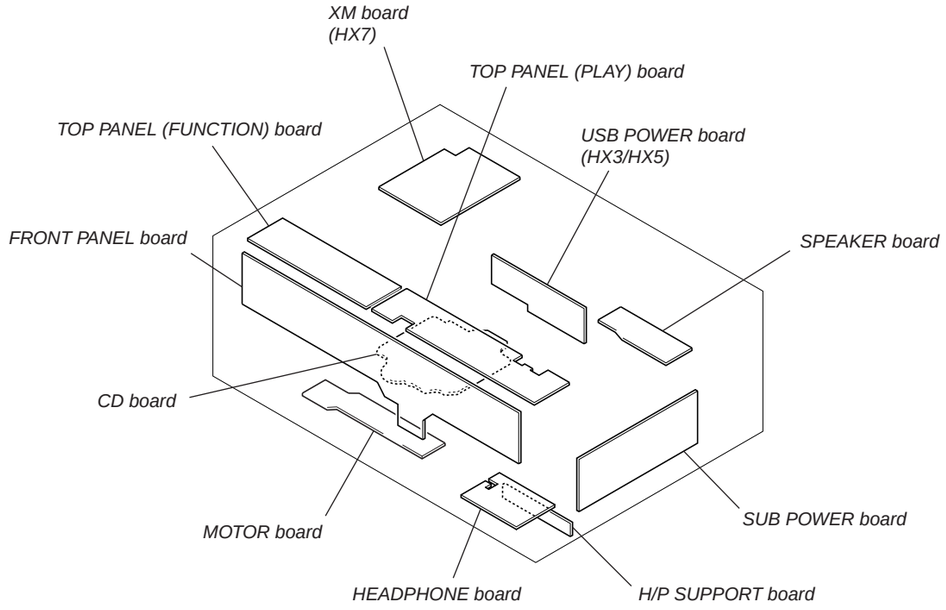
Note on Schematic Diagram:

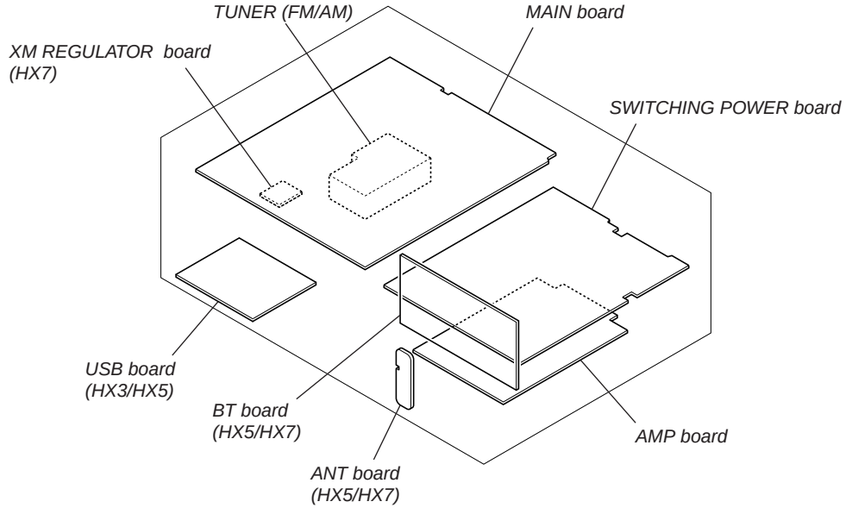
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  – CD Board –
  no mark : CD PLAY
  [ ] : USB
  – USB and USB POWER Boards –
  no mark : USB
  – BT Board –
  no mark : BLUETOOTH
  – XM and XM REGULATOR Boards –
  no mark : XM
  – Other Boards –
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  [ ] : USB
  { } : BLUETOOTH
  ⟨⟨ ⟩⟩ : XM
  < > : SIRIUS
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : AUDIO
  : TUNER (FM/AM)
  : CD PLAY
  : USB
  : BLUETOOTH IN
  : BLUETOOTH OUT
  : XM
  : SIRIUS
  : AUDIO IN
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  KR : Korean model
  SP : Singapore model

• Circuit Boards Location

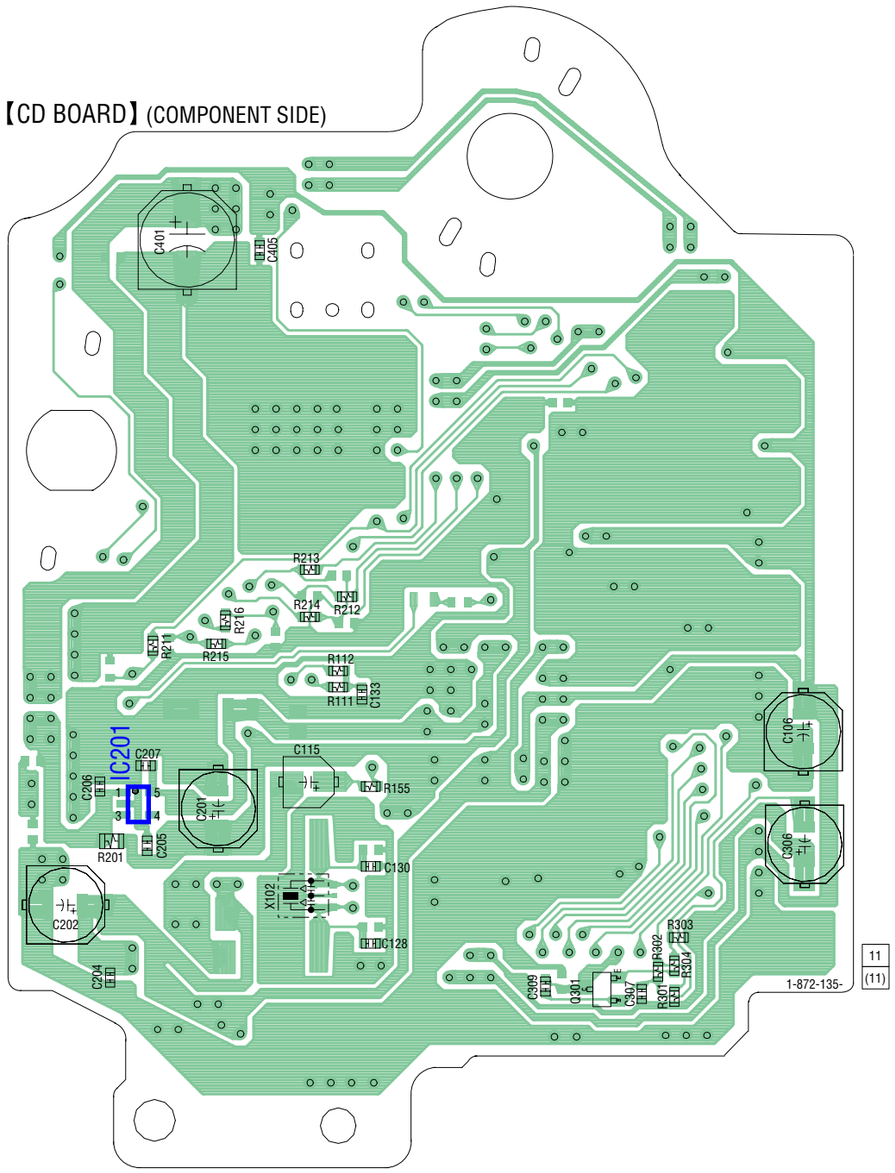




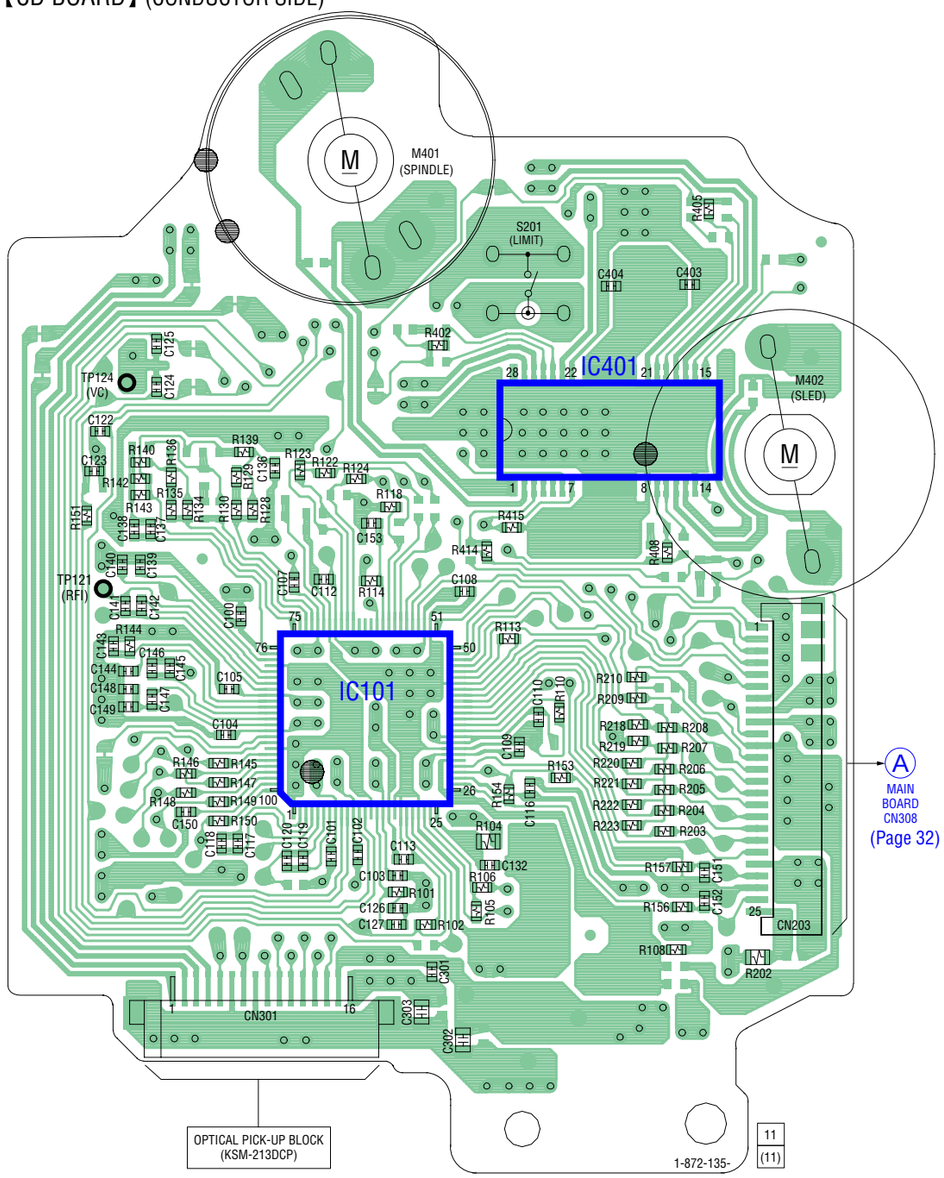
6-6. PRINTED WIRING BOARDS – CD Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

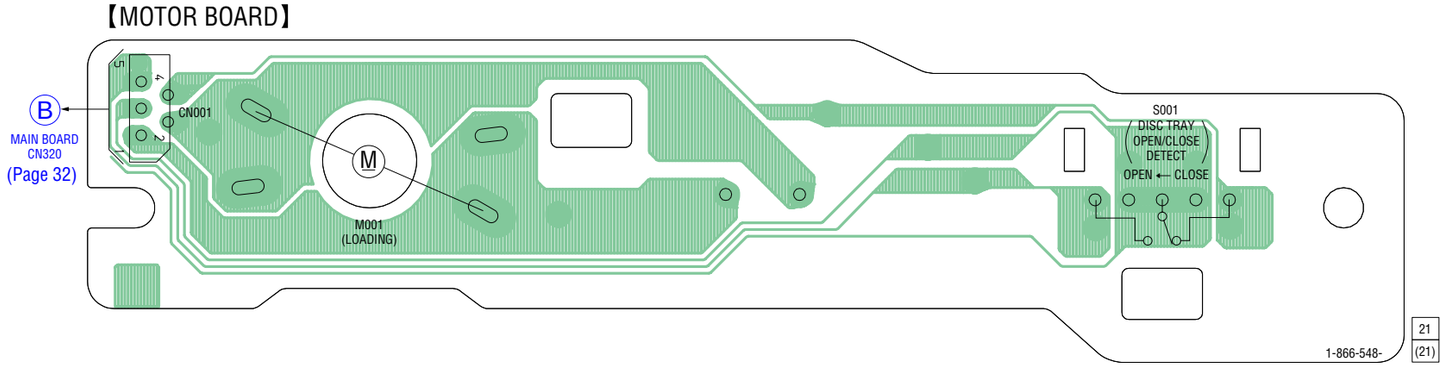
【CD BOARD】(COMPONENT SIDE)



【CD BOARD】(CONDUCTOR SIDE)

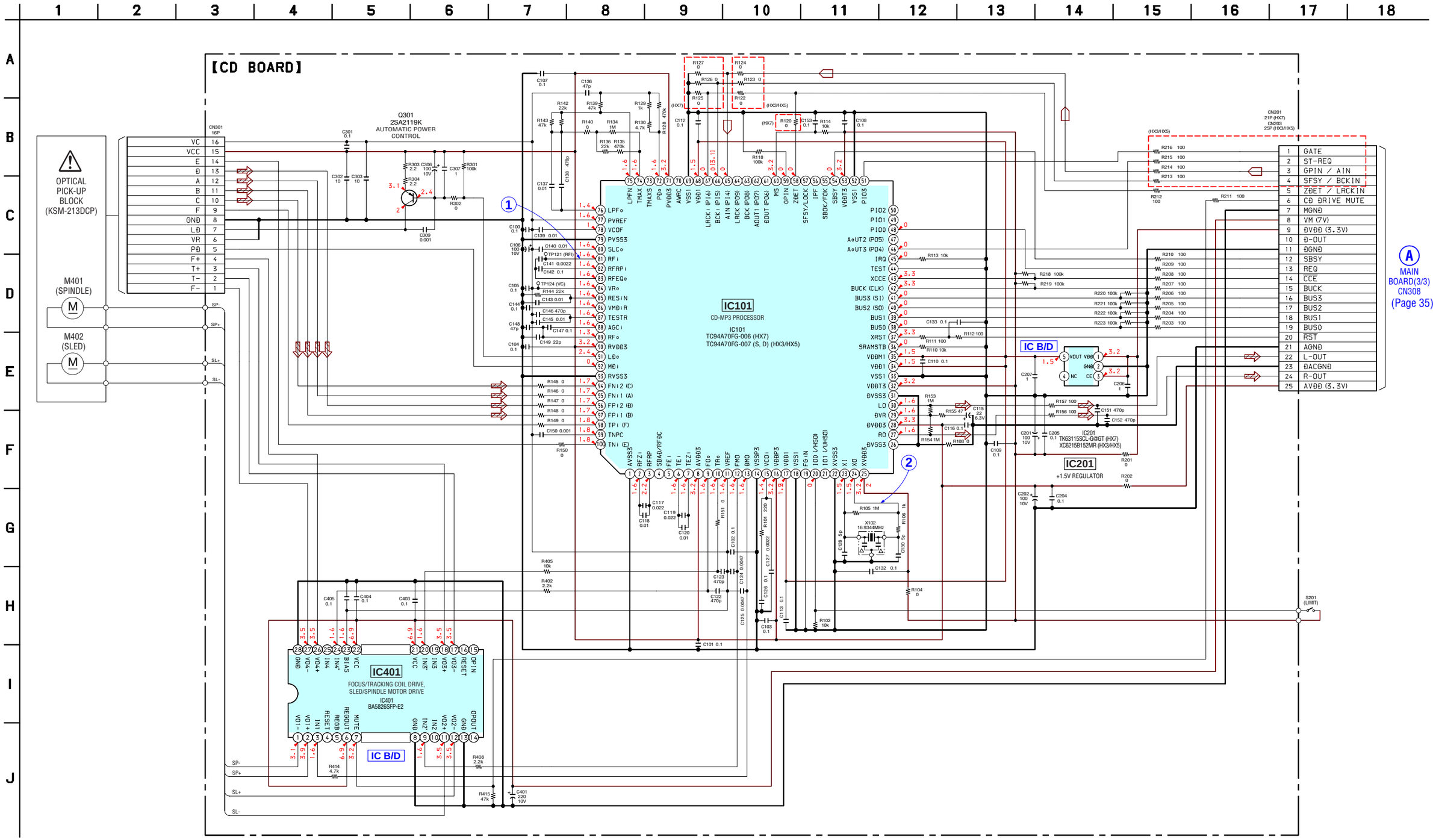


【MOTOR BOARD】



6-7. SCHEMATIC DIAGRAM – CD Section –

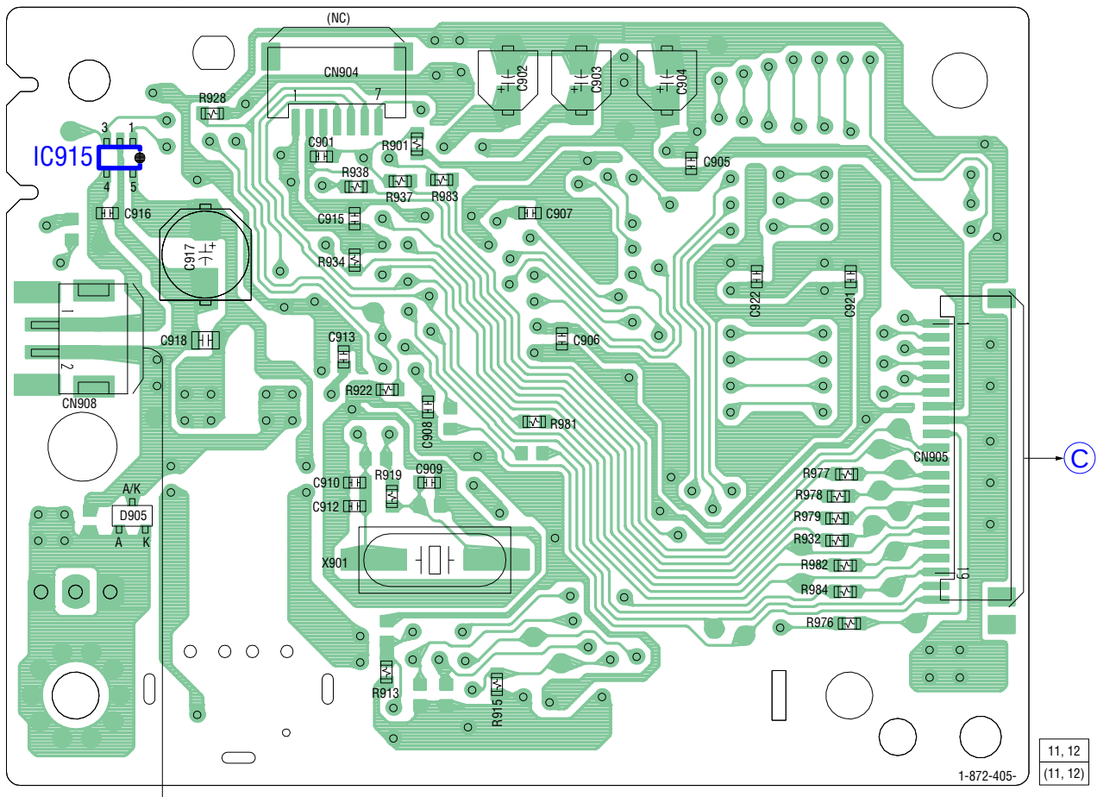
• See page 41 for Waveforms. • See page 46 for IC Block Diagrams. • See page 53 for IC Pin Function Description.



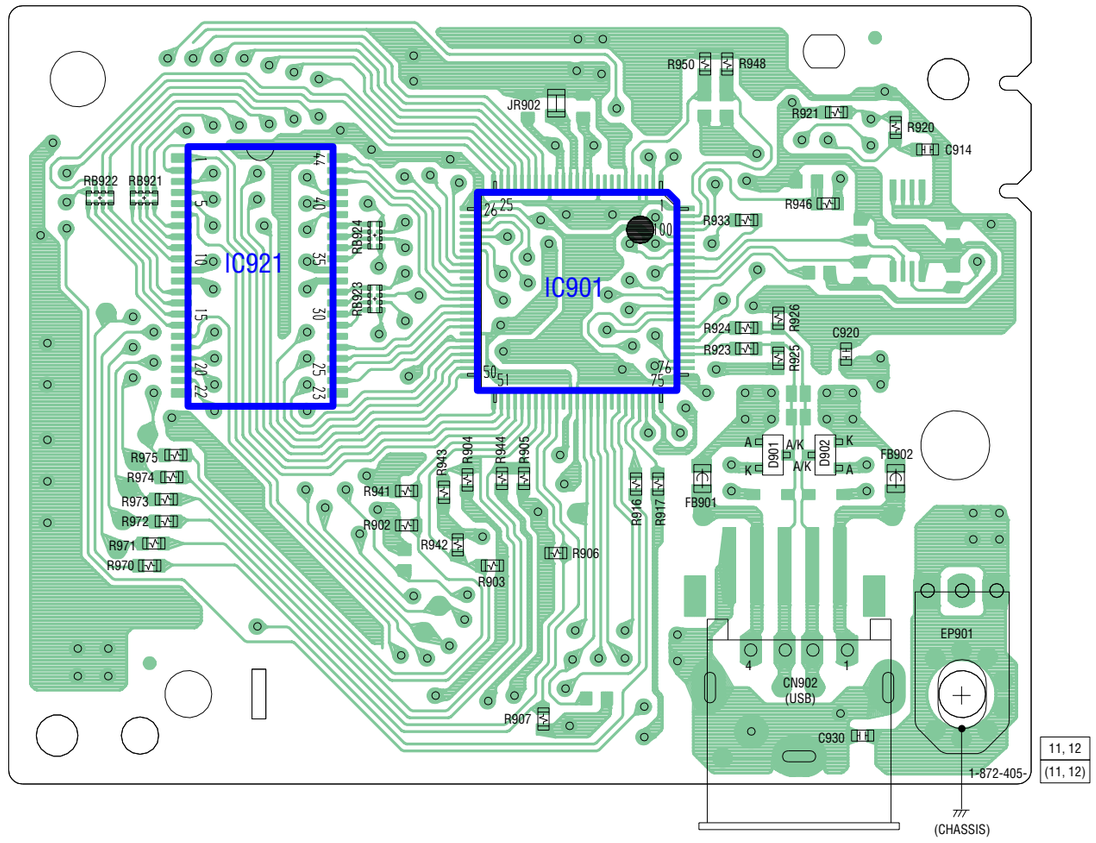
6-8. PRINTED WIRING BOARDS – USB Section (HX3/HX5) –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

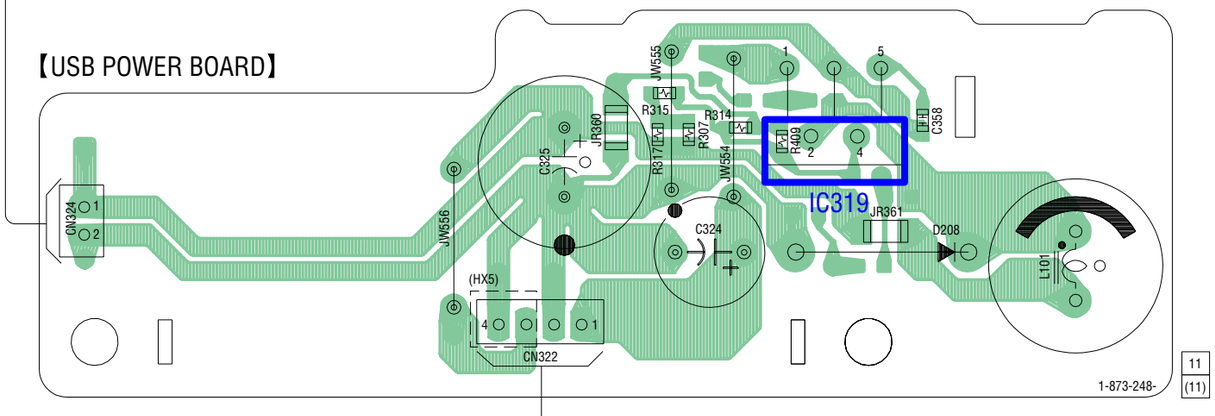
【USB BOARD】(COMPONENT SIDE)



【USB BOARD】(CONDUCTOR SIDE)



【USB POWER BOARD】



Ⓒ MAIN BOARD CN307 (Page 32)

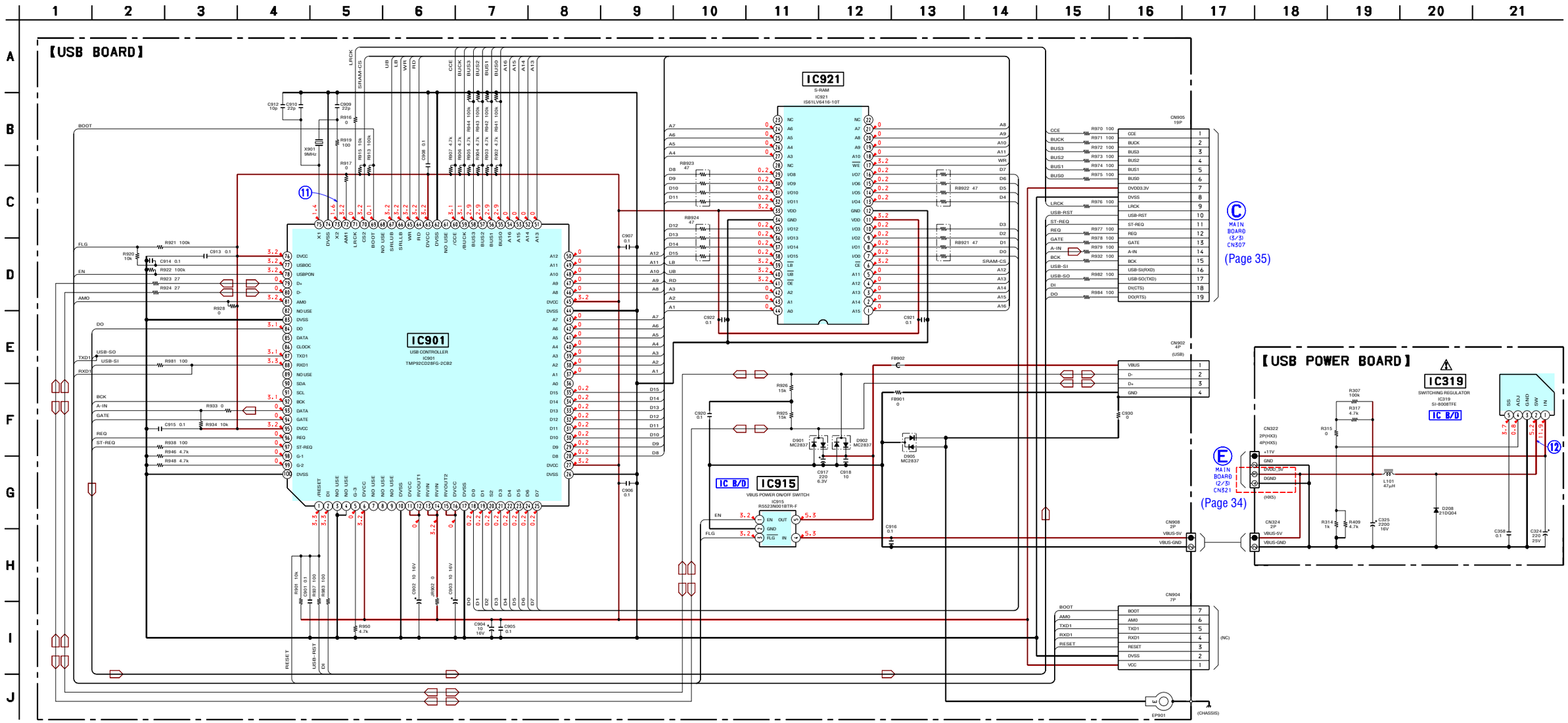
Ⓔ MAIN BOARD CN321 (Page 32)

- **Semiconductor Location**

Ref. No.	Location
D208	F-6
D901	C-9
D902	C-10
D905	C-1
IC319	E-5
IC901	B-8
IC915	B-1
IC921	B-7

6-9. SCHEMATIC DIAGRAM – USB Section (HX3/HX5) –

• See page 41 for Waveforms. • See page 46 for IC Block Diagrams. • See page 53 for IC Pin Function Description.

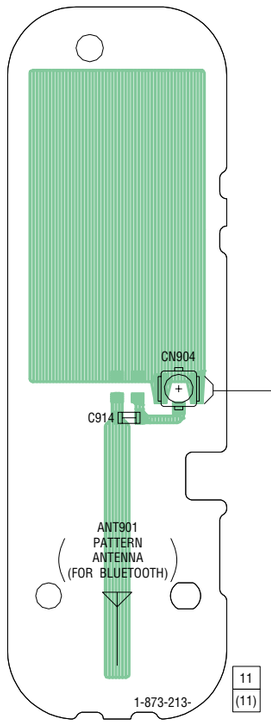


6-10. PRINTED WIRING BOARDS – BLUETOOTH Section (HX5/HX7) –

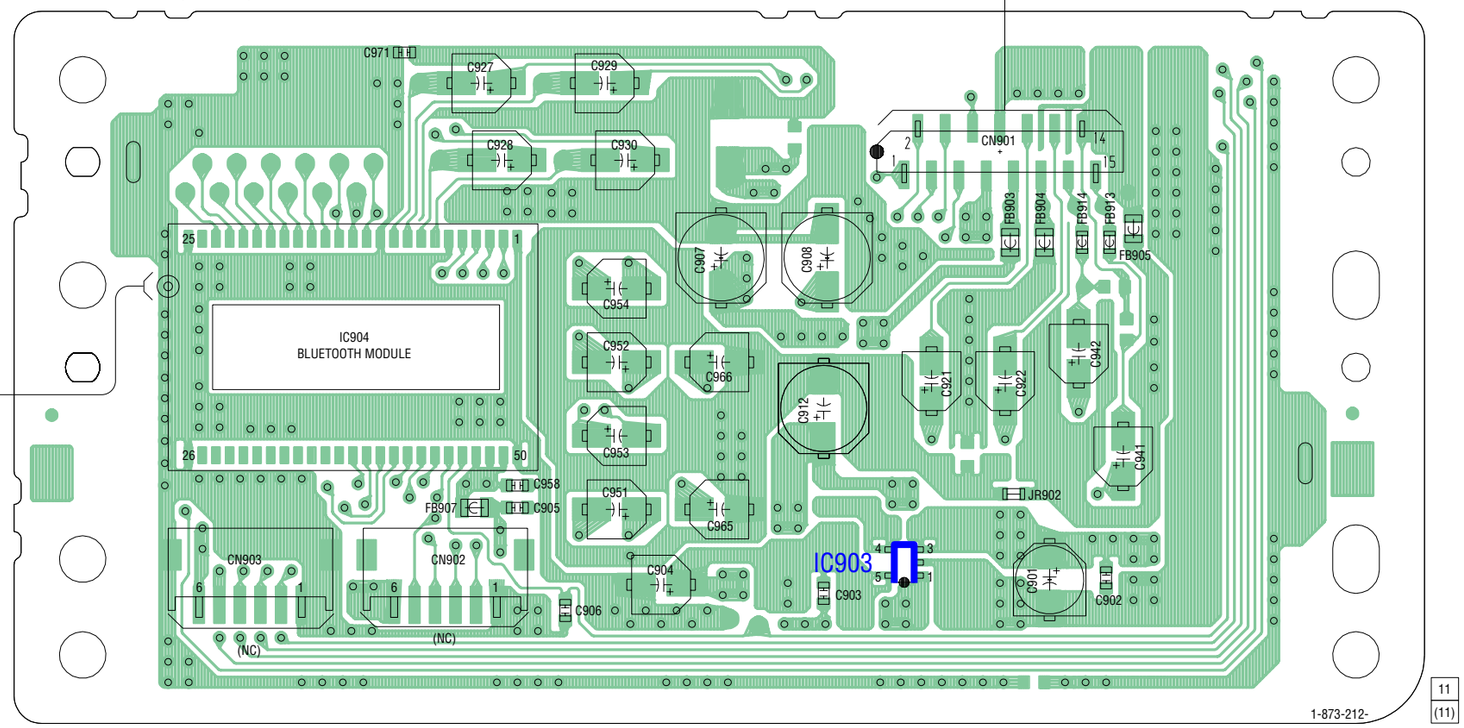
• See page 23 for Circuit Boards Location.

:Uses unleaded solder.

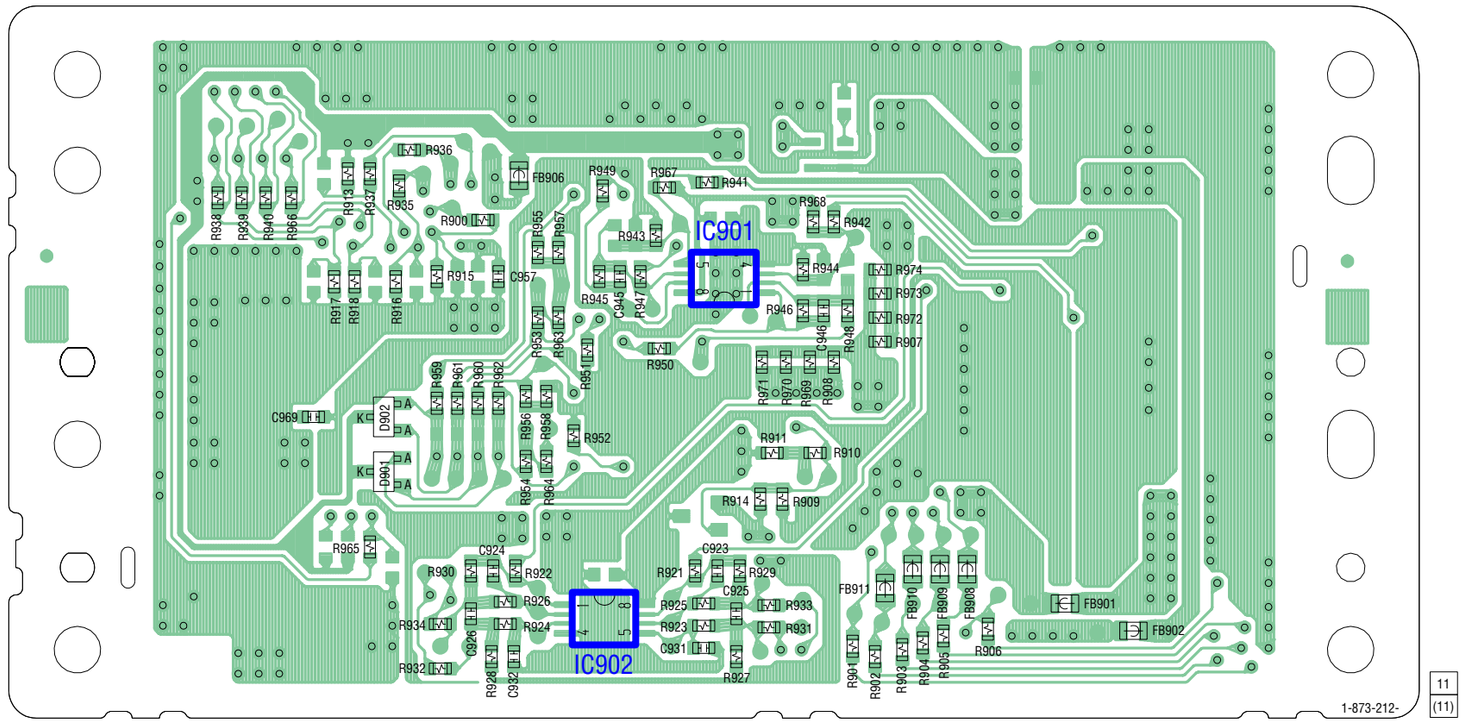
【ANT BOARD】



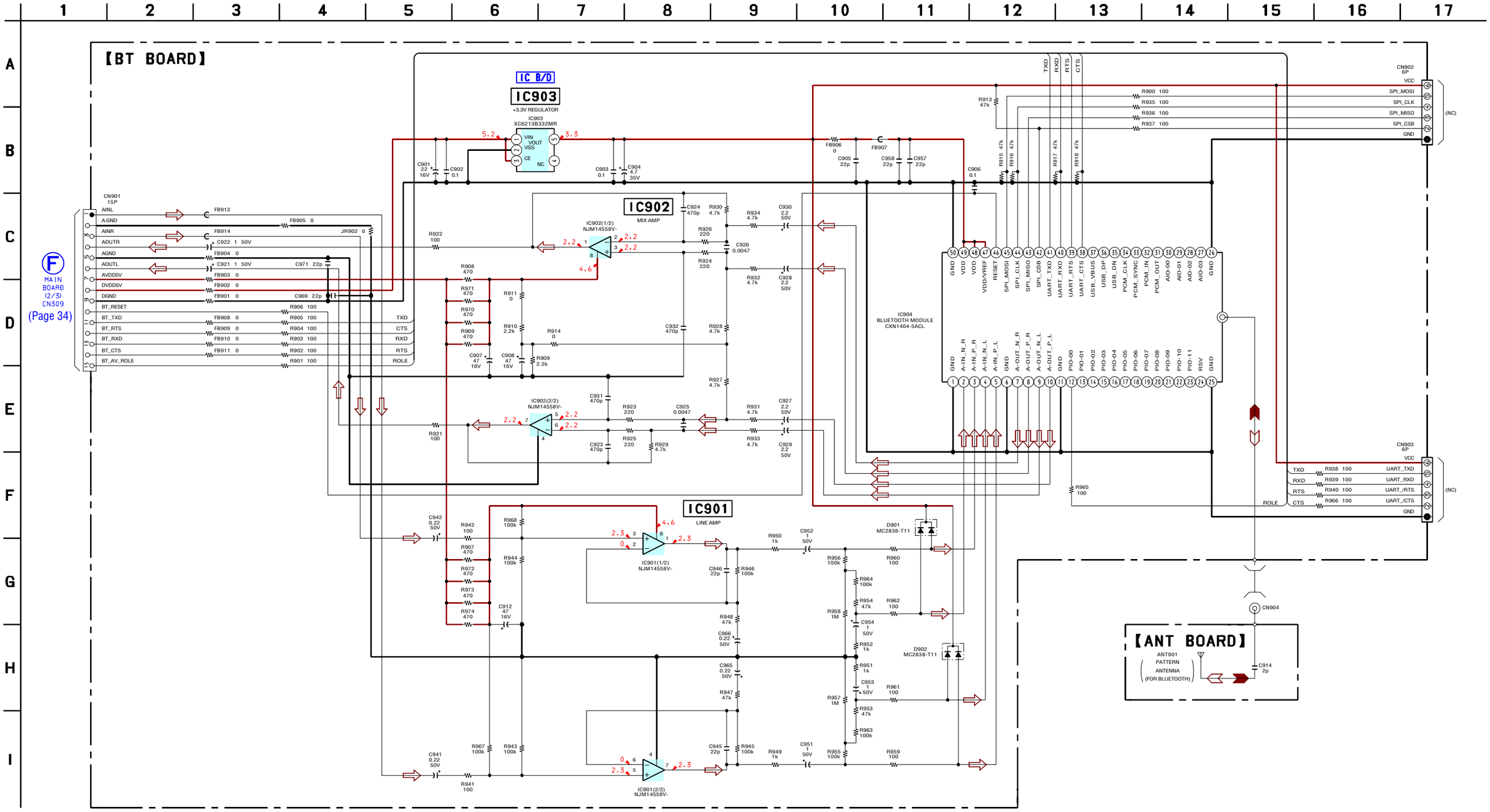
【BT BOARD】(SIDE A)



【BT BOARD】(SIDE B)



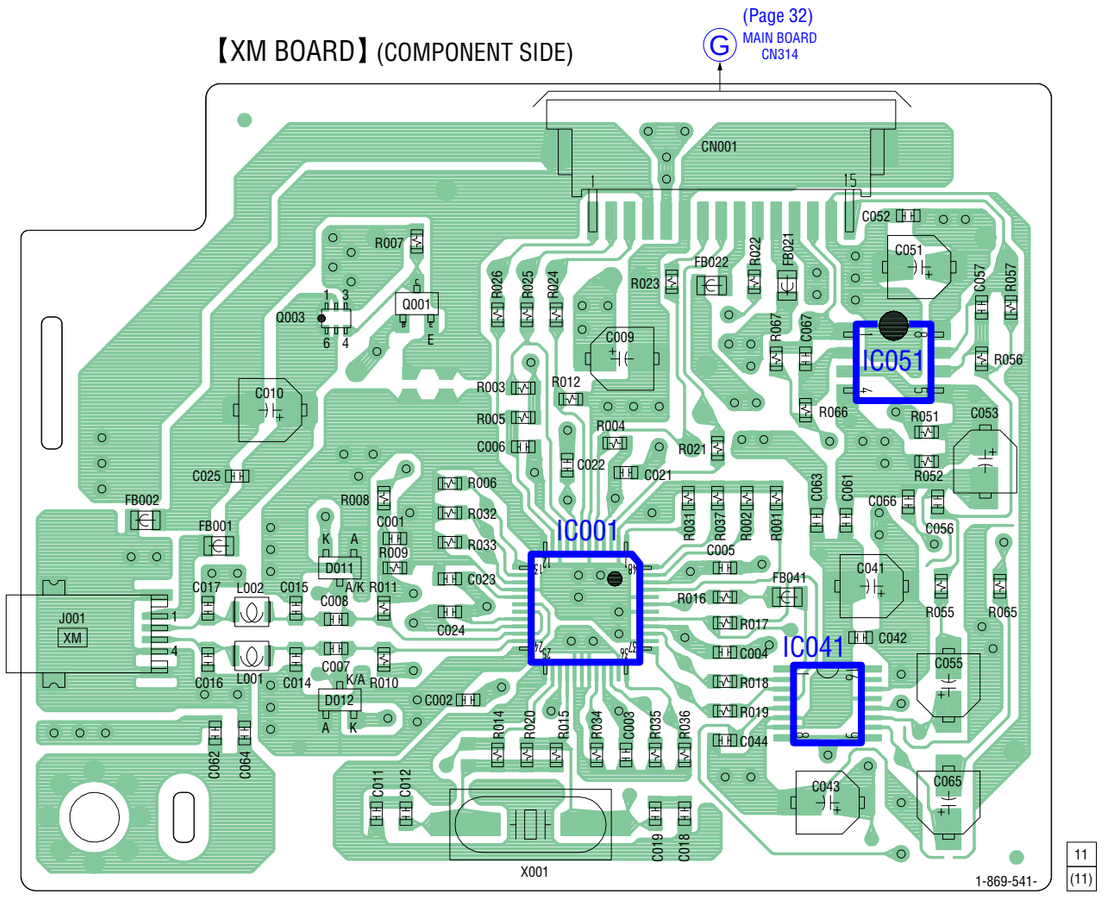
6-11. SCHEMATIC DIAGRAM – BLUETOOTH Section (HX5/HX7) – • See page 46 for IC Block Diagrams.



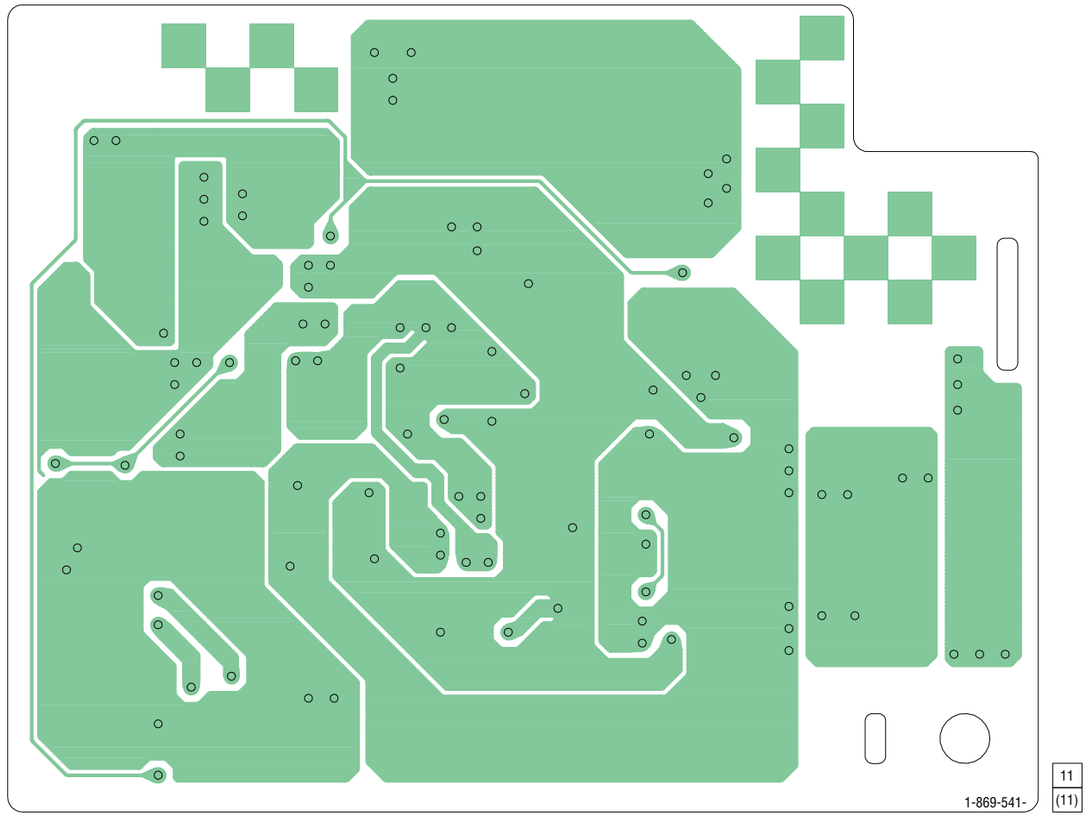
6-12. PRINTED WIRING BOARDS – XM Section (HX7) –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

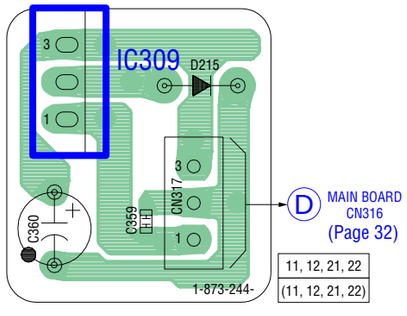
【XM BOARD】(COMPONENT SIDE)



【XM BOARD】(CONDUCTOR SIDE)



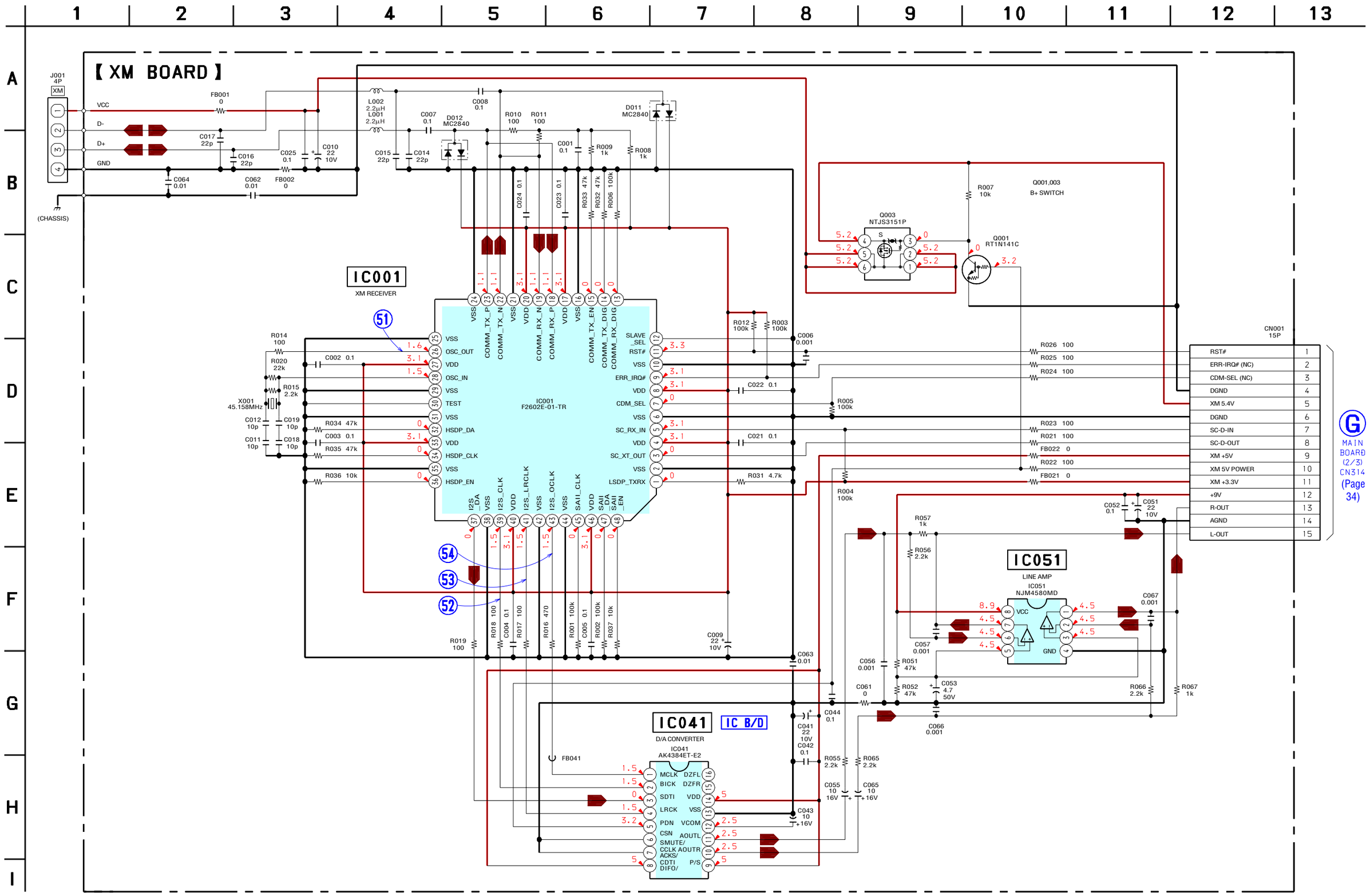
【XM REGULATOR BOARD】



• **Semiconductor Location**

Ref. No.	Location
D011	C-2
D012	D-2
D215	E-2
IC001	C-3
IC041	D-4
IC051	B-4
IC309	E-1
Q001	B-2
Q003	B-2

6-13. SCHEMATIC DIAGRAM – XM Section (HX7) – • See page 41 for Waveforms. • See page 46 for IC Block Diagrams. • See page 53 for IC Pin Function Description.

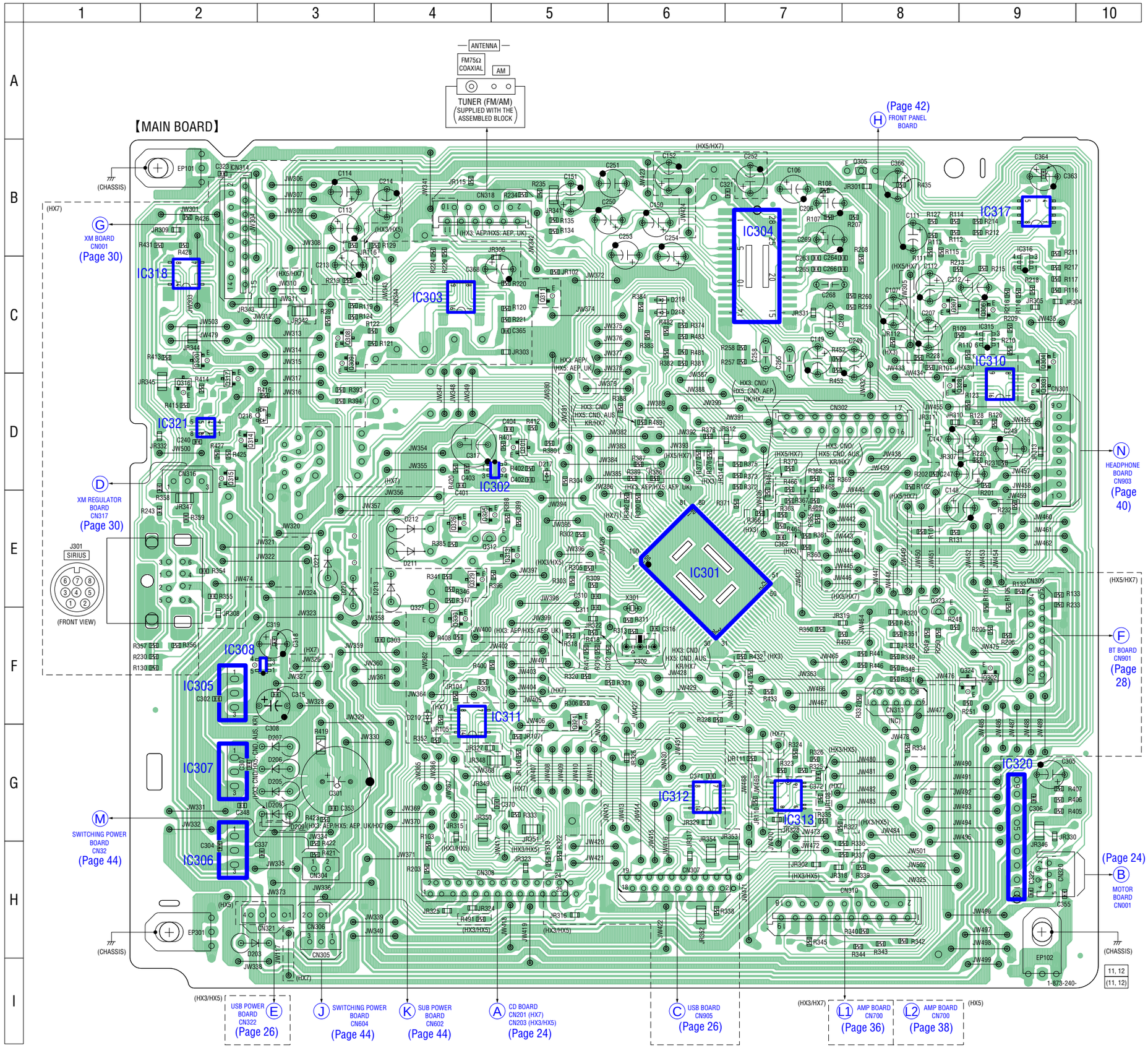


6-14. PRINTED WIRING BOARD – MAIN Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

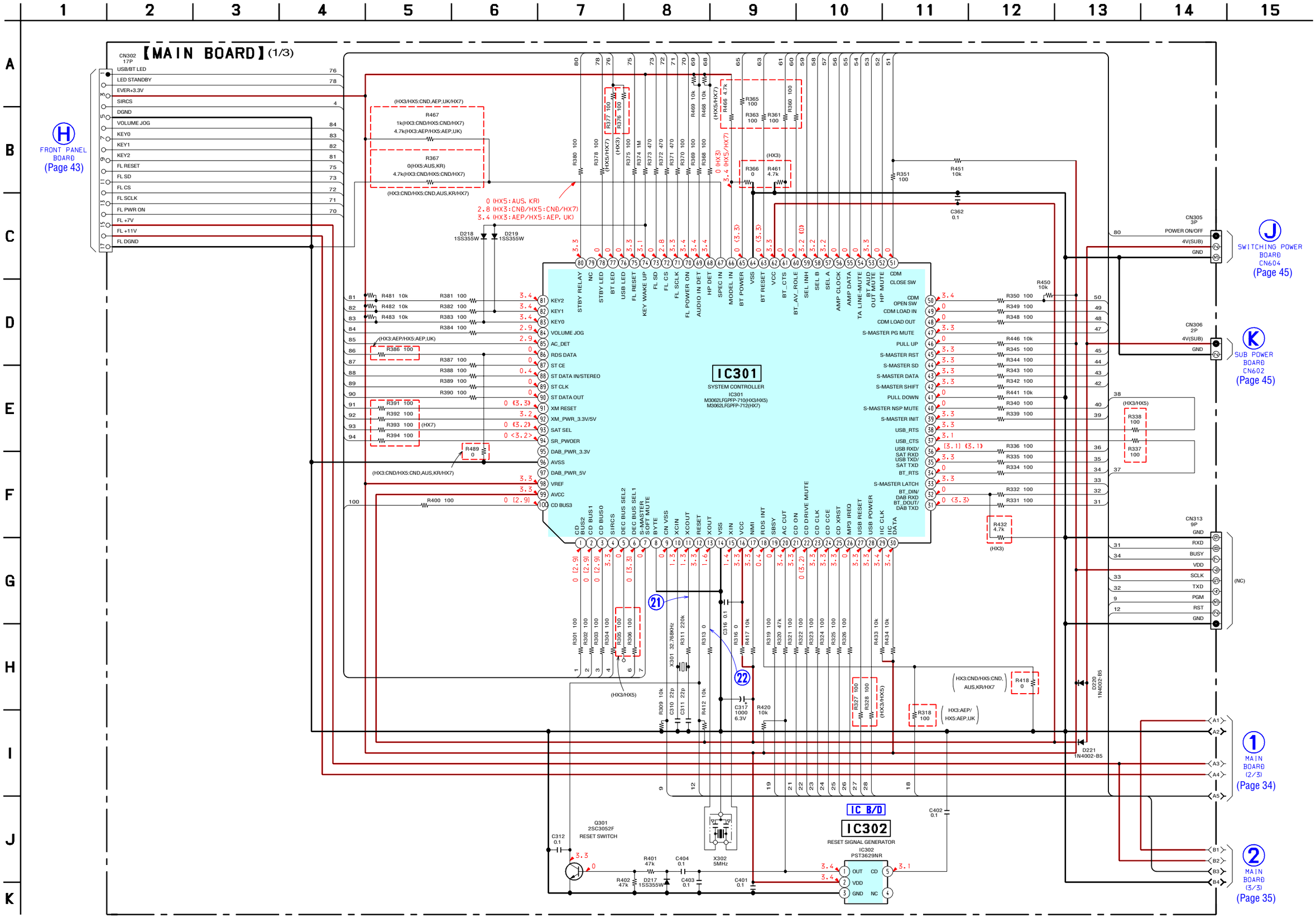
- **Semiconductor Location**

Ref. No.	Location
D203	H-2
D205	G-3
D206	G-3
D207	G-3
D209	G-3
D210	F-4
D211	E-4
D212	E-4
D213	E-4
D216	D-3
D217	D-5
D218	C-6
D219	C-6
D220	E-3
D221	E-3
IC301	E-6
IC302	D-5
IC303	C-4
IC304	C-7
IC305	F-2
IC306	H-2
IC307	G-2
IC308	F-3
IC310	D-9
IC311	F-4
IC312	G-6
IC313	G-7
IC315	C-9
IC316	C-9
IC317	B-9
IC318	C-2
IC320	G-9
IC321	D-2
Q301	D-5
Q302	F-9
Q303	D-9
Q304	C-9
Q305	B-8
Q306	C-9
Q307	C-8
Q308	C-3
Q309	C-3
Q311	C-5
Q312	E-4
Q313	E-5
Q314	D-2
Q315	D-2
Q316	D-2
Q317	D-2
Q320	C-2
Q321	F-5
Q323	F-8
Q324	F-9
Q325	E-4
Q326	E-4
Q327	E-4
Q328	D-9
Q329	E-4
Q330	F-4

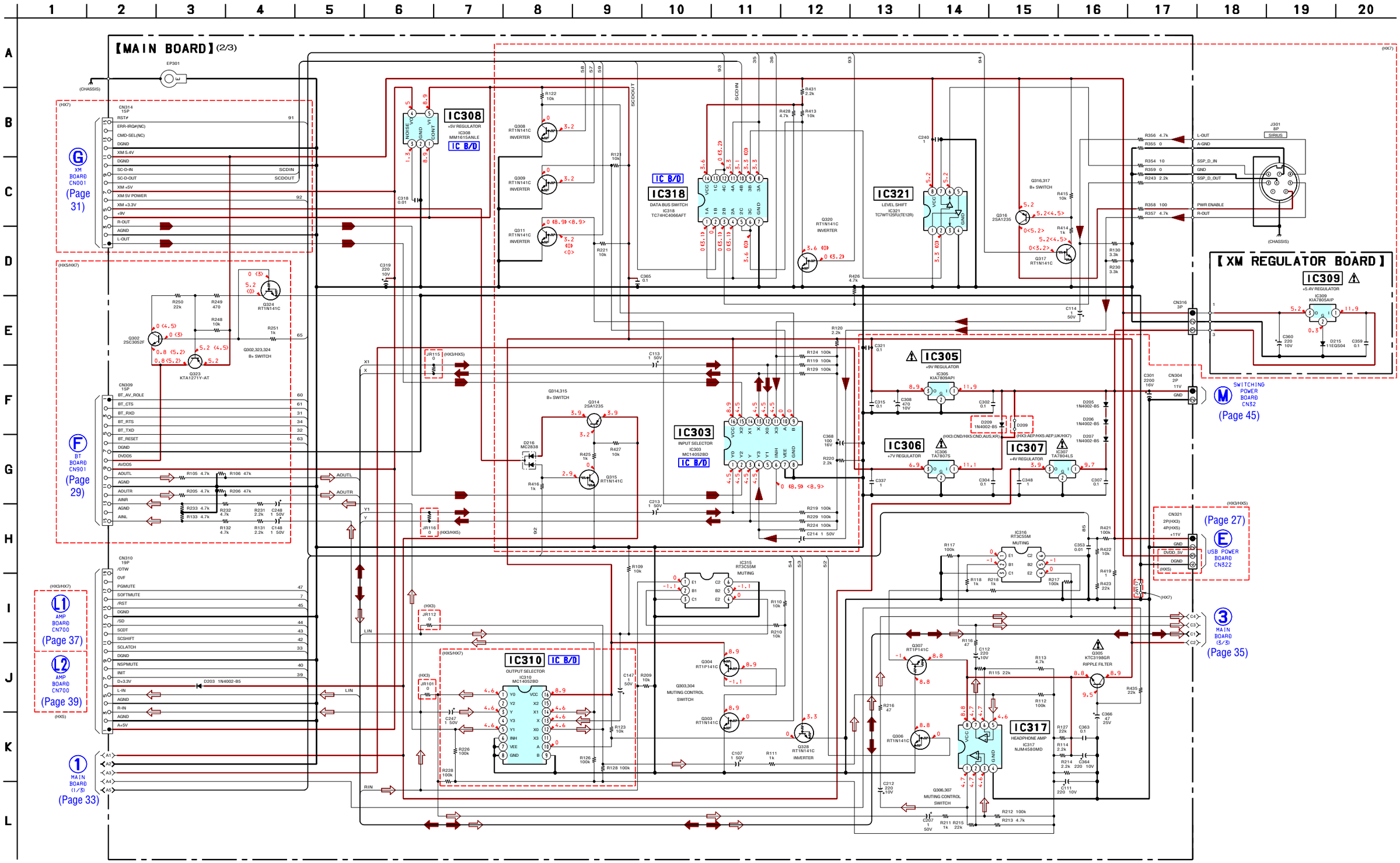


6-15. SCHEMATIC DIAGRAM – MAIN Section (1/3) –

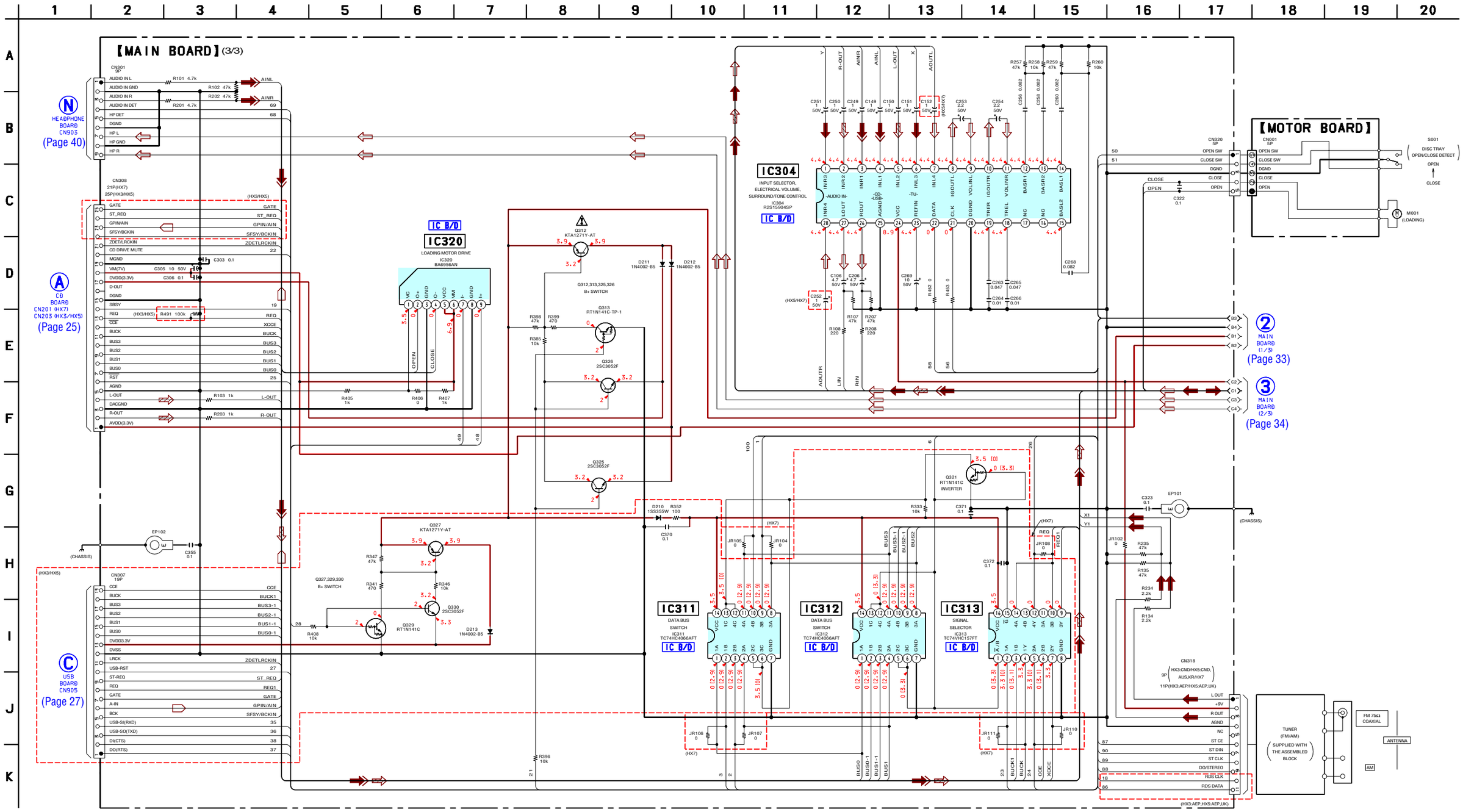
• See page 41 for Waveforms. • See page 46 for IC Block Diagrams. • See page 53 for IC Pin Function Description.



6-16. SCHEMATIC DIAGRAM – MAIN Section (2/3) – See page 46 for IC Block Diagrams.



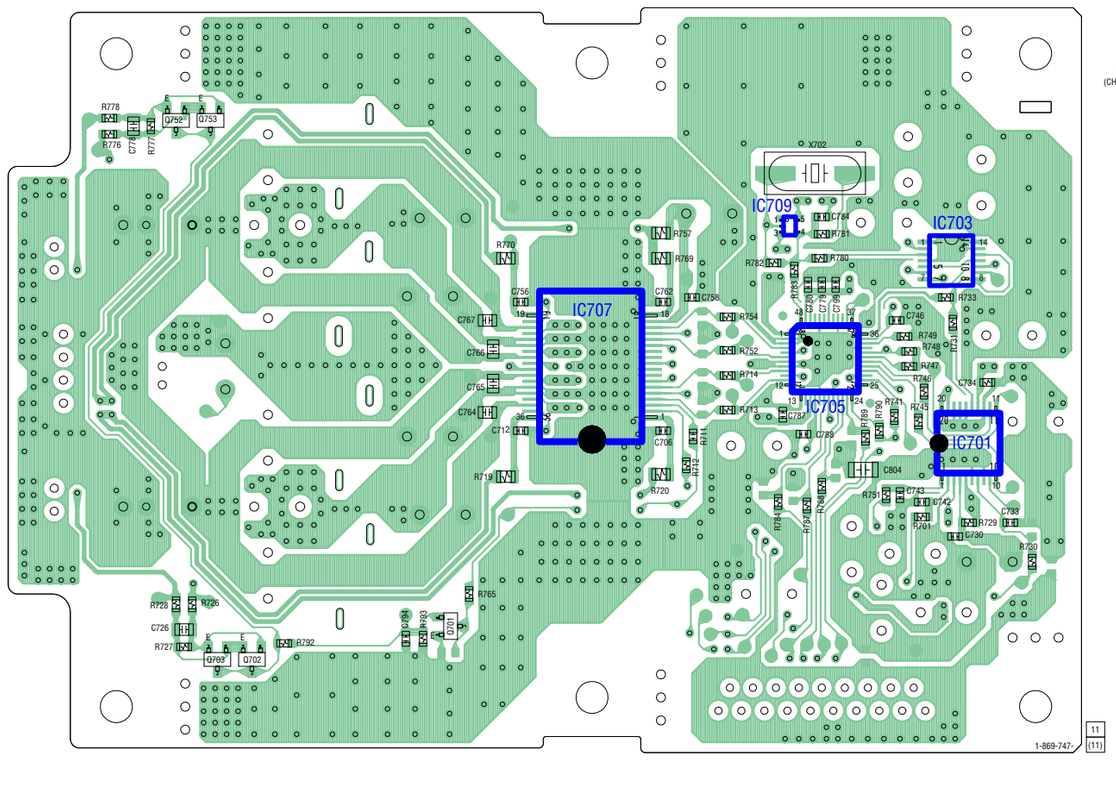
6-17. SCHEMATIC DIAGRAM – MAIN Section (3/3) – • See page 46 for IC Block Diagrams.



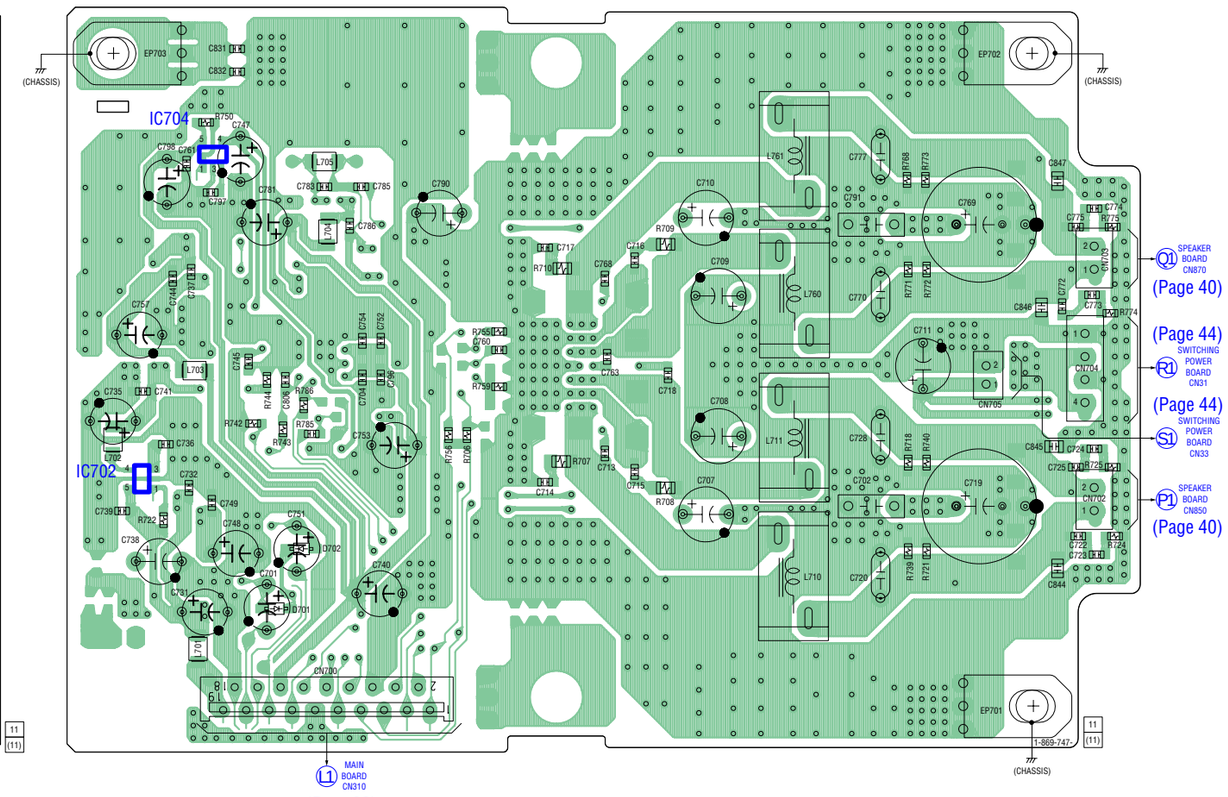
6-18. PRINTED WIRING BOARD – AMP Section (HX3/HX7) –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

【AMP BOARD】(COMPONENT SIDE)



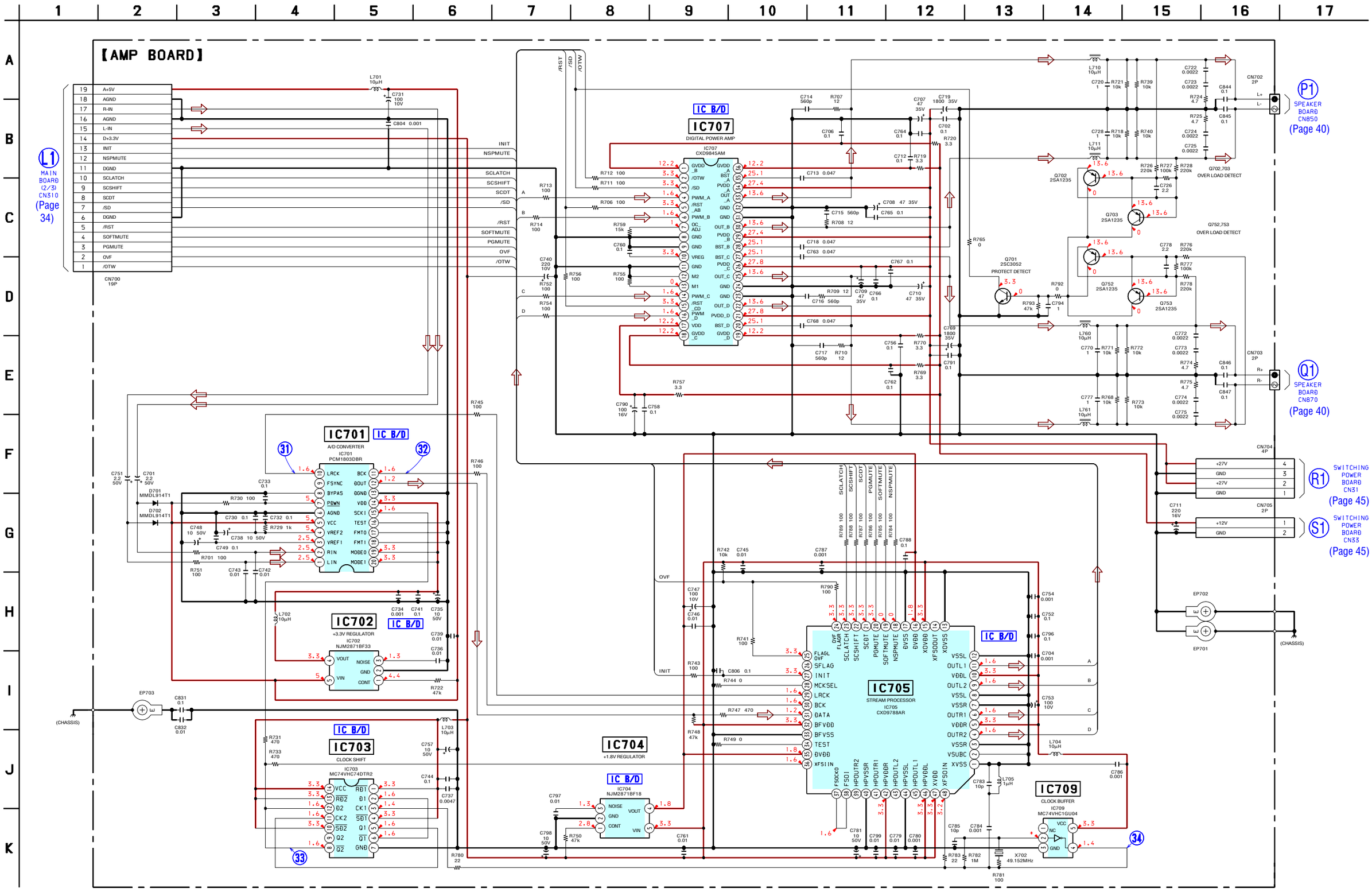
【AMP BOARD】(CONDUCTOR SIDE)



- **Semiconductor Location**

Ref. No.	Location
D701	E-10
D702	E-10
IC701	D-7
IC702	D-9
IC703	C-7
IC704	B-9
IC705	C-6
IC707	C-5
IC709	B-6
Q701	E-4
Q702	E-2
Q703	E-2
Q752	B-2
Q753	B-2

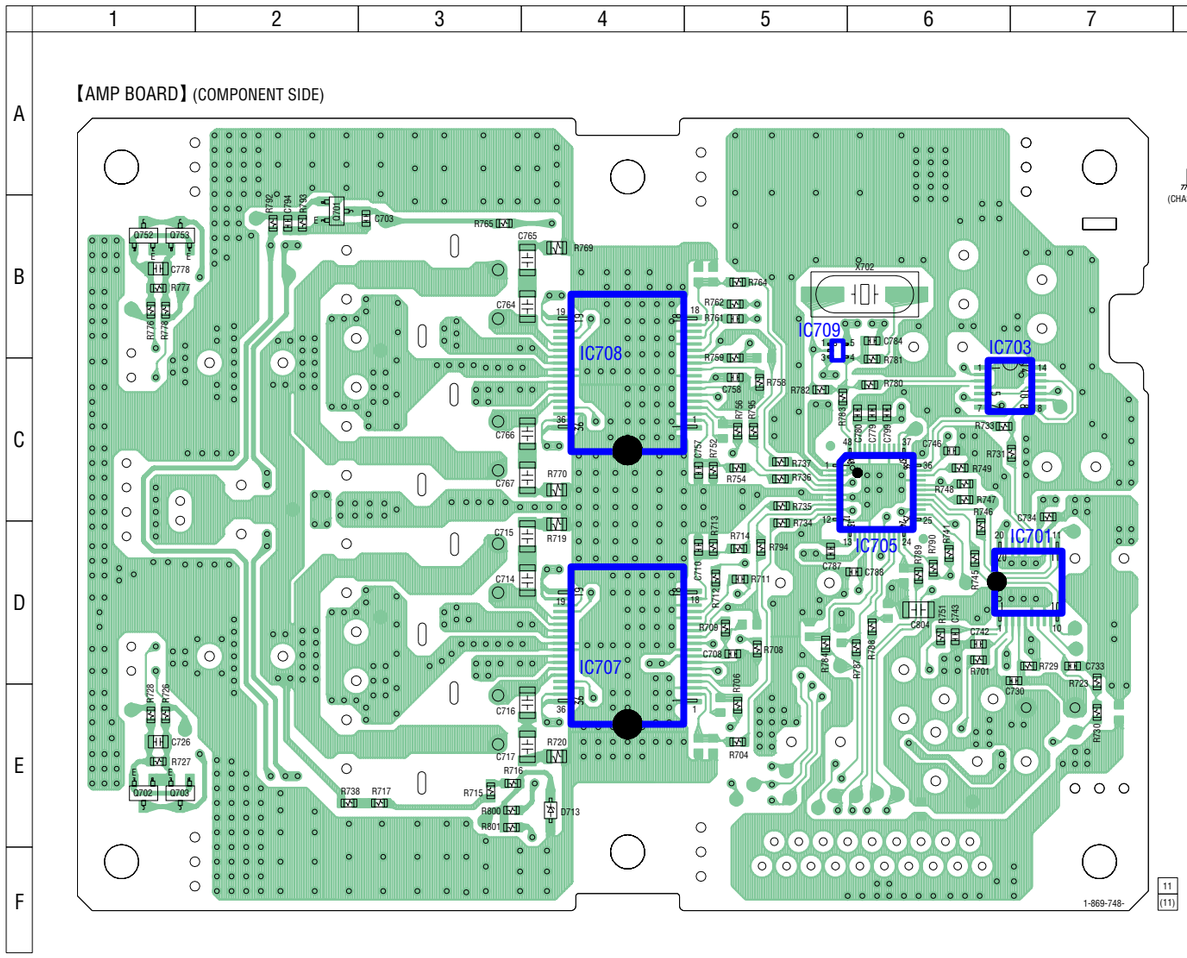
6-19. SCHEMATIC DIAGRAM – AMP Section (HX3/HX7) – • See page 41 for Waveforms. • See page 46 for IC Block Diagrams.



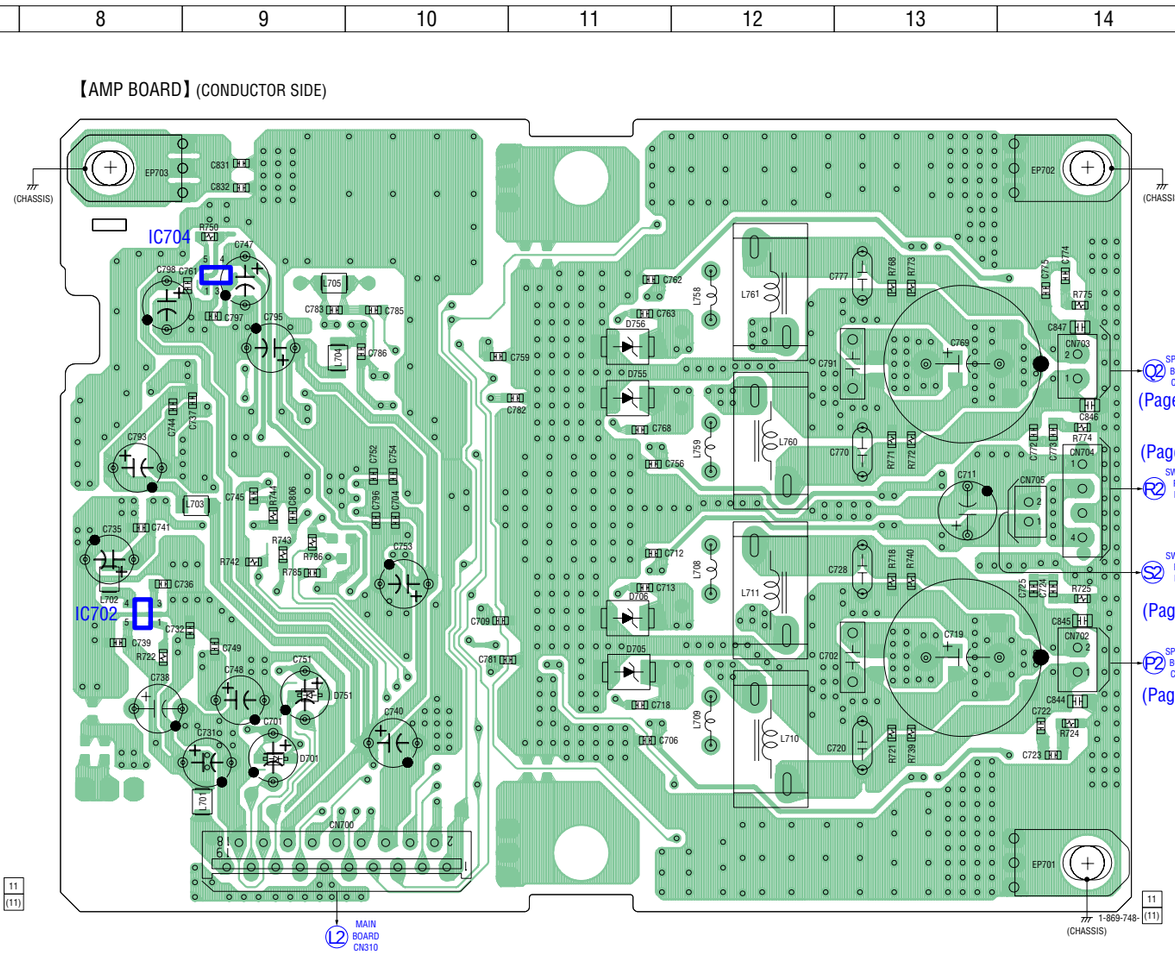
6-20. PRINTED WIRING BOARD – AMP Section (HX5) –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

【AMP BOARD】(COMPONENT SIDE)



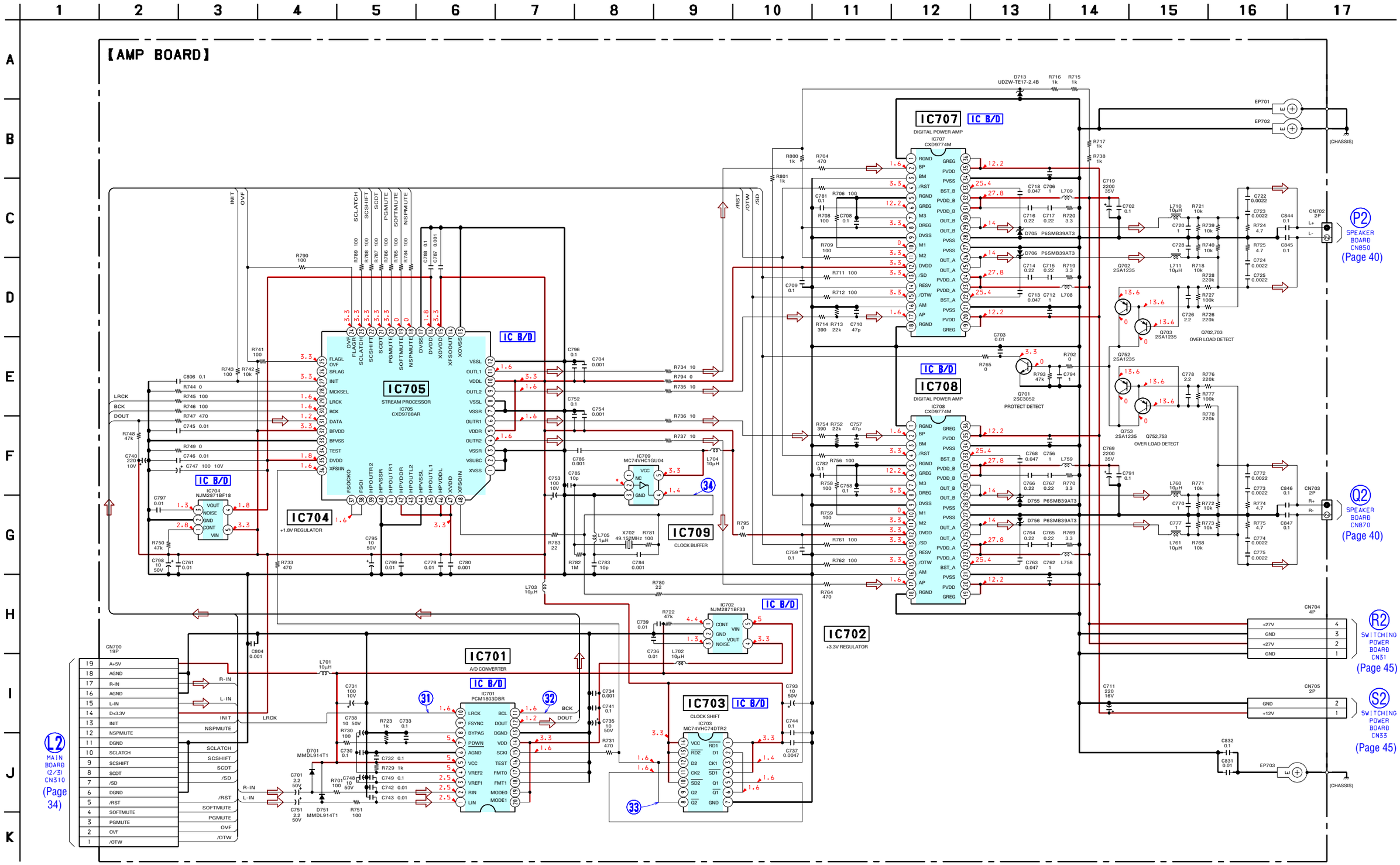
【AMP BOARD】(CONDUCTOR SIDE)



- **Semiconductor Location**

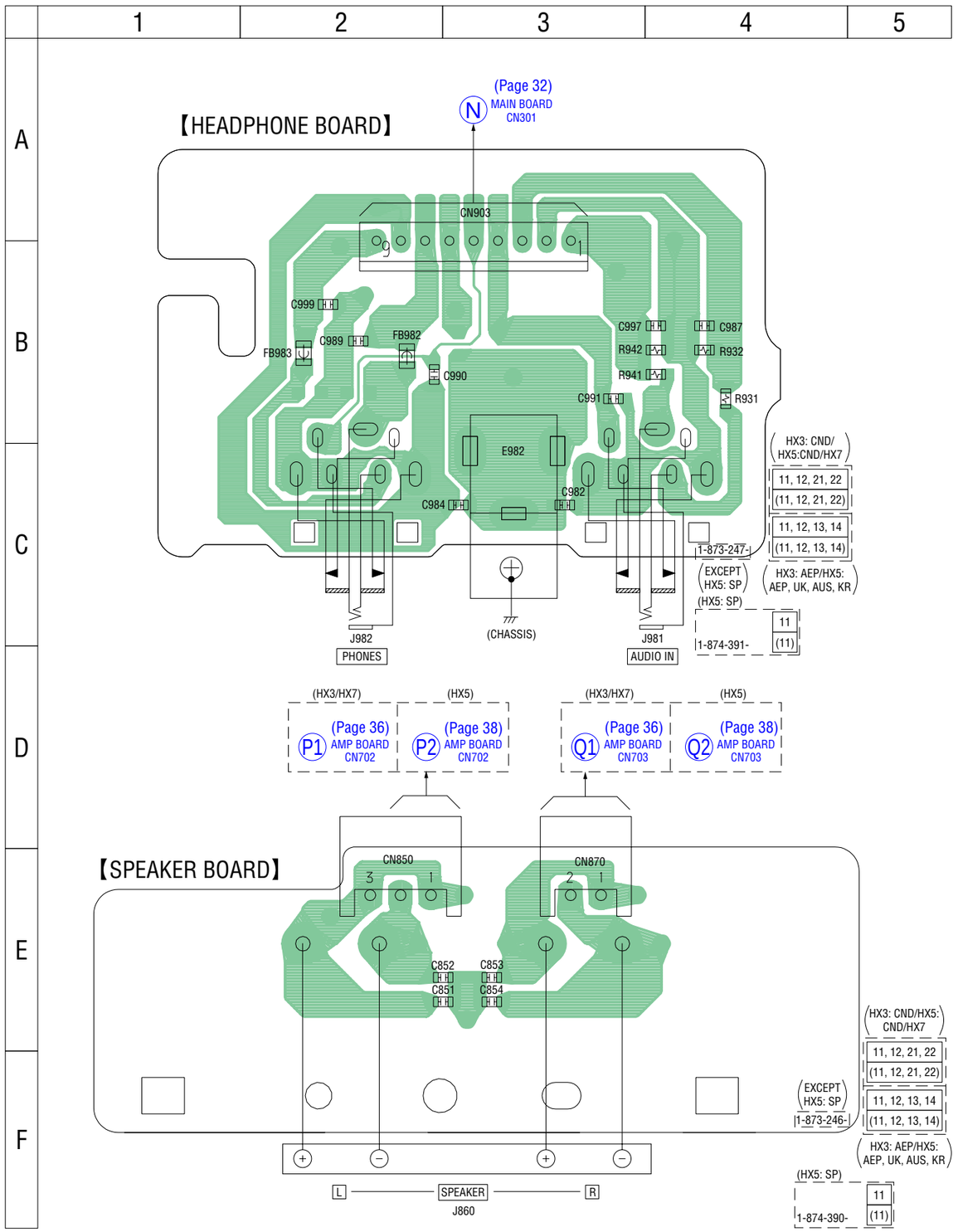
Ref. No.	Location
D701	E-9
D705	D-11
D706	D-11
D713	E-4
D751	E-9
D755	C-11
D756	B-11
IC701	D-7
IC702	D-8
IC703	C-6
IC704	B-9
IC705	C-6
IC707	D-4
IC708	C-4
IC709	B-5
Q701	B-2
Q702	E-1
Q703	E-1
Q752	B-1
Q753	B-1

6-21. SCHEMATIC DIAGRAM – AMP Section (HX5) – • See page 41 for Waveforms. • See page 46 for IC Block Diagrams.

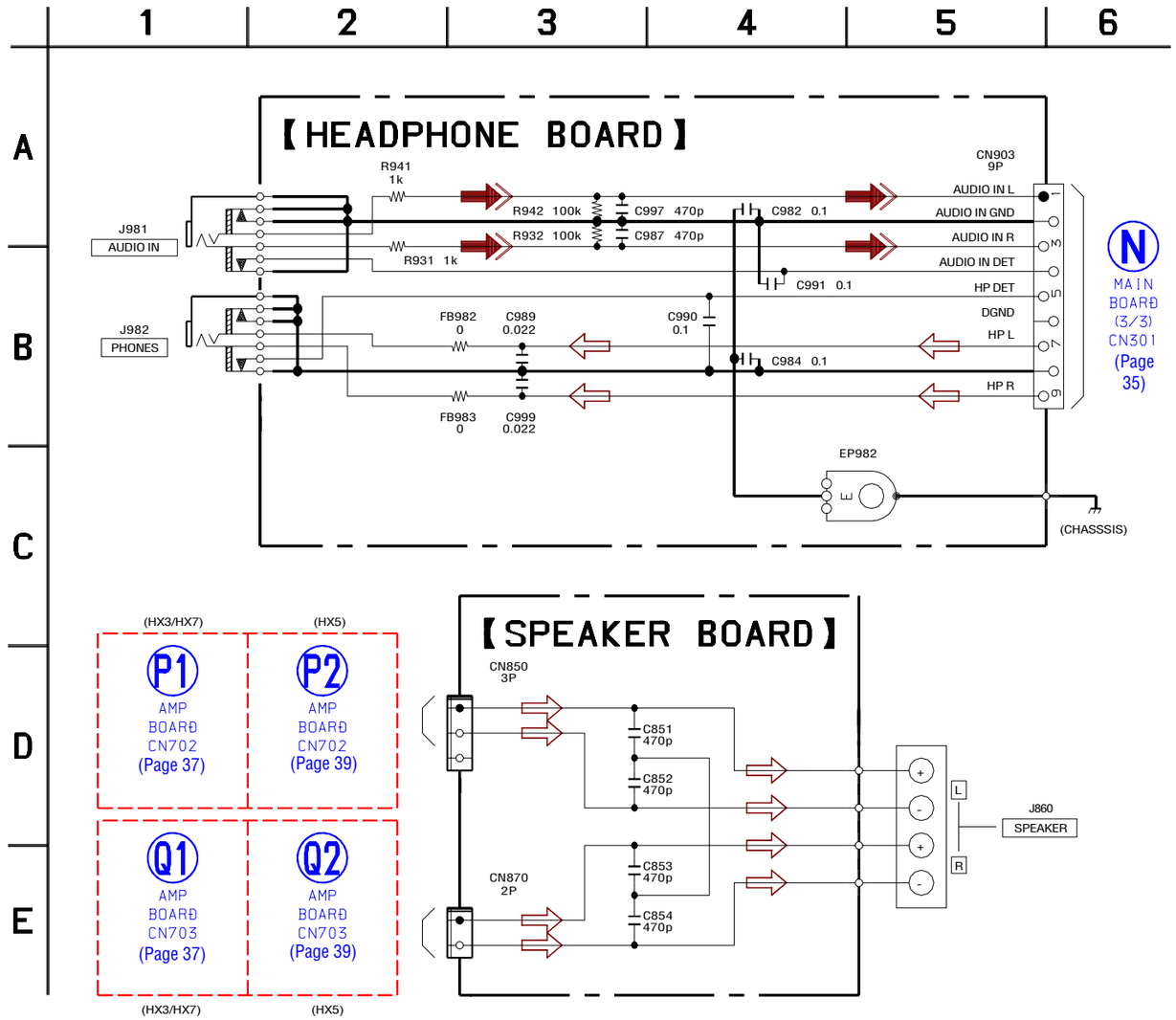


6-22. PRINTED WIRING BOARDS – OUTPUT Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.



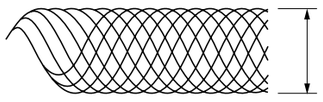
6-23. SCHEMATIC DIAGRAM – OUTPUT Section –



• **Waveforms**

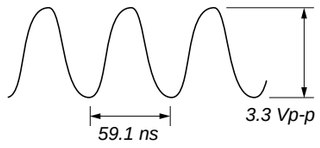
– CD Board –

(1) IC101 (81) (RFi) (CD play mode)



200 mV/DIV, 500 ns/DIV

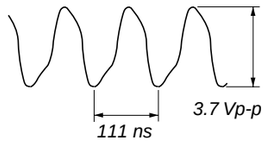
(2) IC101 (24) (XO) (CD play mode)



1 V/DIV, 20 ns/DIV

– USB Board –

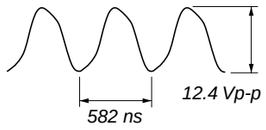
(11) IC901 (73) (X2)



1 V/DIV, 50 ns/DIV

– USB POWER Board –

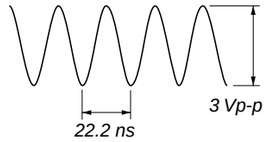
(12) IC319 (2) (SW)



5 V/DIV, 200 ns/DIV

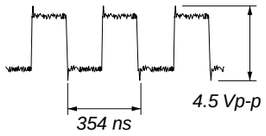
– XM Board –

(51) IC001 (26) (OSC_OUT) (XM mode)



1 V/DIV, 10 ns/DIV

(52) IC001 (39) (I2S_CLK) (XM mode)

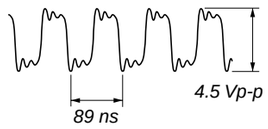


1 V/DIV, 100 ns/DIV

(53) IC001 (41) (I2S_LRCLK) (XM mode)

1 V/DIV, 10 µs/DIV

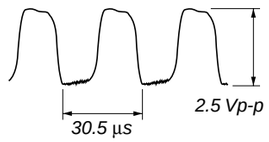
(54) IC001 (43) (I2S_OCLK) (XM mode)



1 V/DIV, 50 ns/DIV

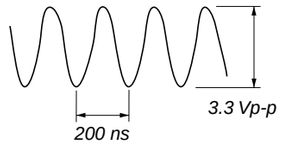
– MAIN Board –

(21) IC301 (11) (XCOUT)



1 V/DIV, 10 µs/DIV

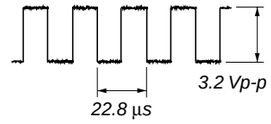
(22) IC301 (13) (XOUT)



1 V/DIV, 100 ns/DIV

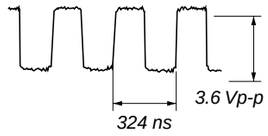
– AMP Board –

(31) IC701 (10) (LRCK)



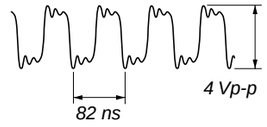
1 V/DIV, 10 µs/DIV

(32) IC701 (11) (BCK)



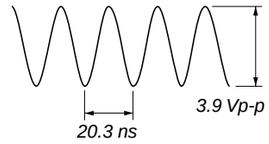
1 V/DIV, 100 ns/DIV

(33) IC703 (8) (Q2)



1 V/DIV, 50 ns/DIV

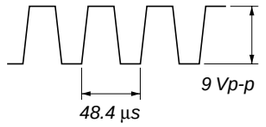
(34) IC709 (4)



1 V/DIV, 10 ns/DIV

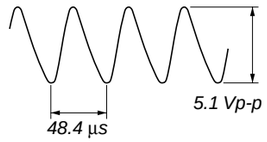
– FRONT PANEL Board –

(41) IC901 (1)



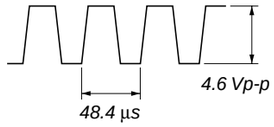
5 V/DIV, 20 µs/DIV

(42) IC901 (2)



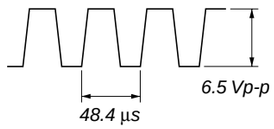
2 V/DIV, 20 µs/DIV

(43) IC901 (3)



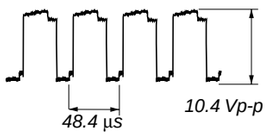
2 V/DIV, 20 µs/DIV

(44) Q906, 907 (Base)



5 V/DIV, 20 µs/DIV

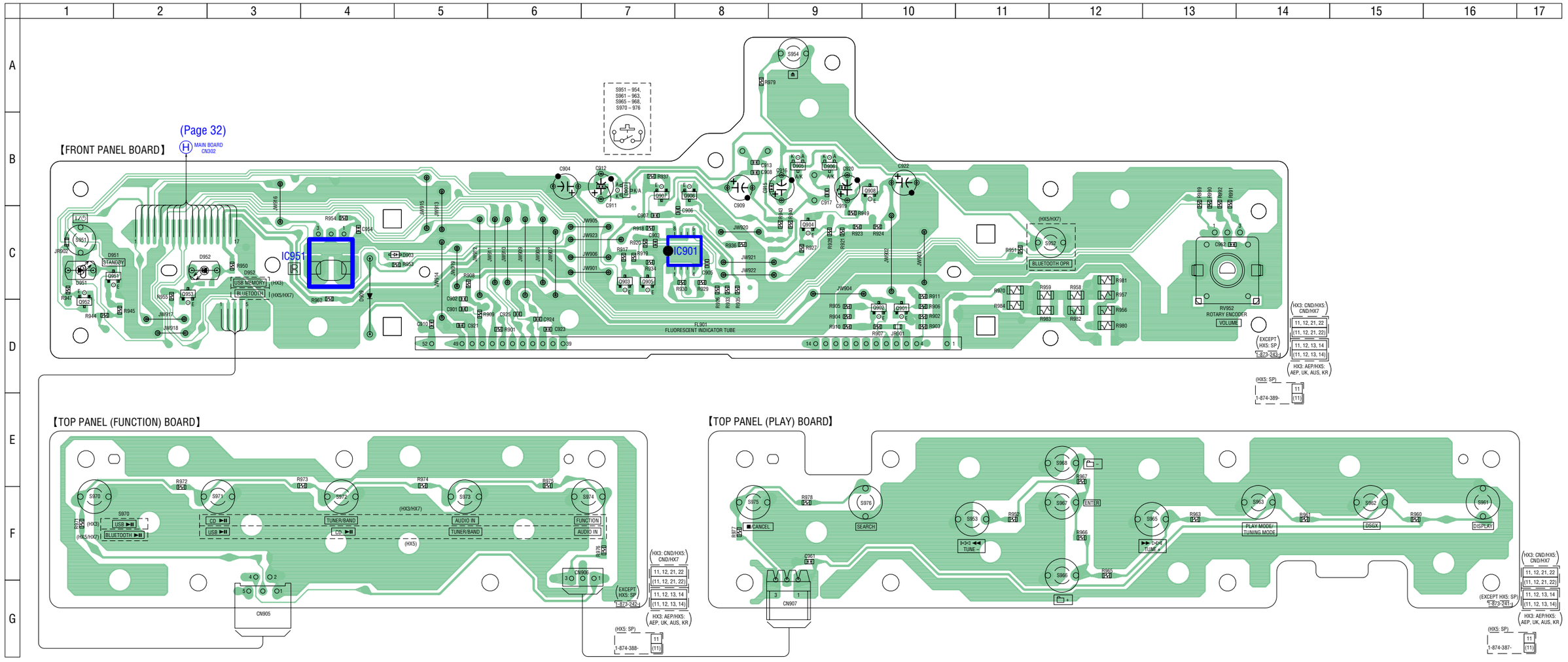
(45) Q906, 907 (Collector)



5 V/DIV, 20 µs/DIV

6-24. PRINTED WIRING BOARDS – PANEL Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D903	C-5	Q901	D-10
D905	B-9	Q902	D-10
D906	B-9	Q903	C-7
D907	B-7	Q904	C-9
D909	C-4	Q905	C-7
D951	C-1	Q906	B-8
D952	C-2	Q907	B-7
		Q908	B-10
IC901	C-8	Q951	C-2
IC951	C-4	Q952	D-1
		Q953	C-2

6-25. SCHEMATIC DIAGRAM – PANEL Section – • See page 41 for Waveforms. • See page 46 for IC Block Diagrams.

【FRONT PANEL BOARD】

FL901
FLUORESCENT INDICATOR TUBE

IC901
POWER CONTROL SWITCH, B+ SWITCH
IC901 NJM4558M

IC951
REMOTE CONTROL RECEIVER
IC951 NJL24H400A

RV952
ROTARY ENCODER
VOLUME

Q901 2SC3052F GRID DRIVE
Q902 2SC3052F GRID DRIVE
Q903,905 POWER CONTROL SWITCH
Q904,908 B+ SWITCH
Q906,907 DC/DC CONVERTER
Q951 2SC3052F LED DRIVE
Q952 2SA1235 B+ SWITCH
Q953 2SC3052F LED DRIVE

D909 1N4002-B5
D951 SLR-325VCT31P STANDBY
D952 SLR-325DCT31(HX3) SELK5E20C-DTP15(HX5/HX7)

BLUETOOTH OPR (HX5/HX7)
USB MEMORY (HX3)
BLUETOOTH (HX5/HX7)

H MAIN BOARD (1/3) CN302 (Page 33)

【TOP PANEL (PLAY) BOARD】

CN907 3P: KEY1, DGND, KEY2-1

TUNE -, ENTER, TUNE +, PLAY MODE/ TUNING MODE, DSGX, DISPLAY, SEARCH, CANCEL

【TOP PANEL (FUNCTION) BOARD】

CN906 3P: KEY2-1, DGND, KEY1

CN905 5P: KEY0, KEY1, KEY2, DGND, DGND

(HX3/HX7): FUNCTION, AUDIO IN, TUNER/BAND, CD, USB (HX3)
(HX5): AUDIO IN, TUNER/BAND, CD, USB, BLUETOOTH (HX5/HX7)

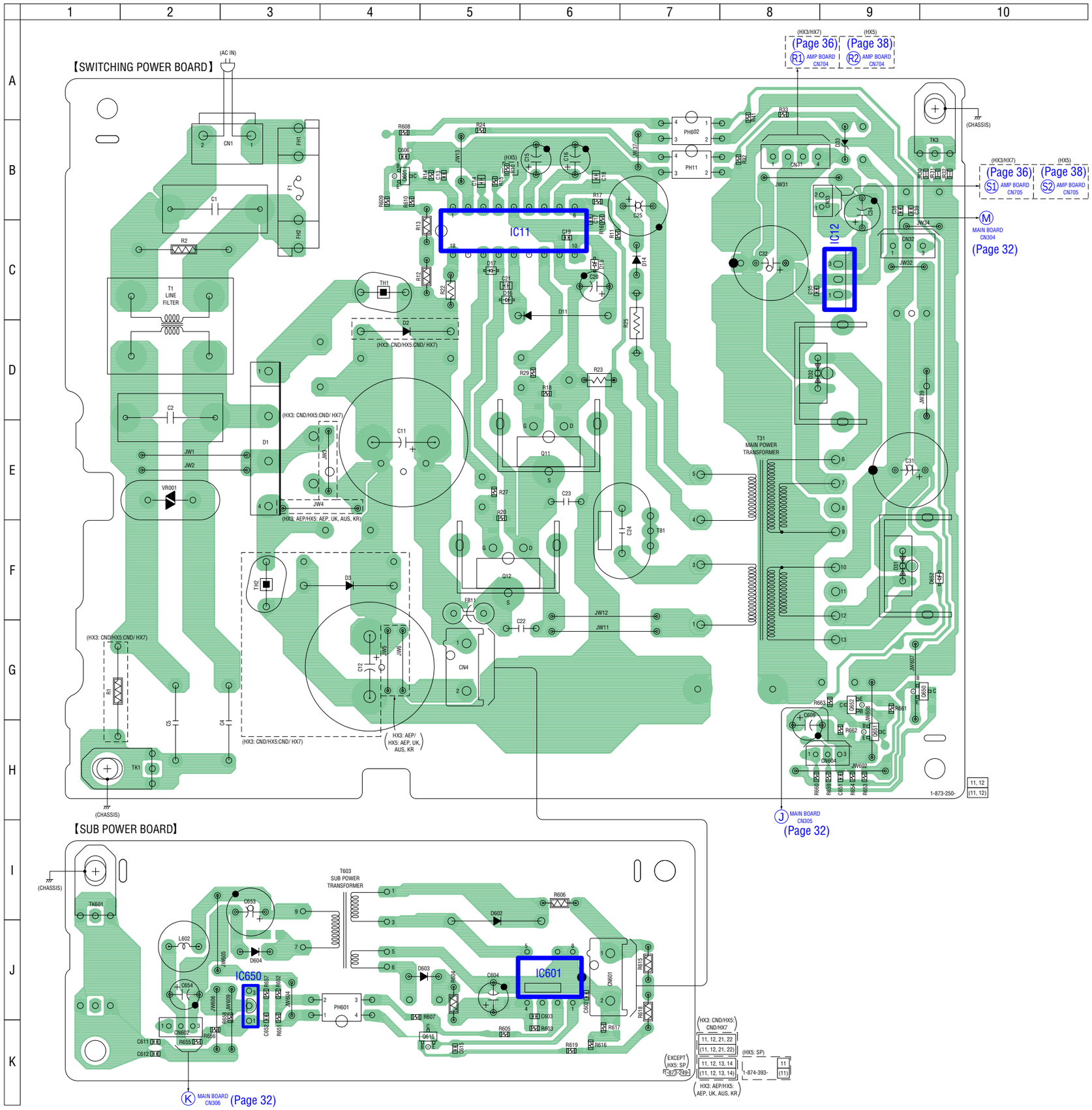
6-26. PRINTED WIRING BOARDS – POWER SUPPLY Section –

• See page 23 for Circuit Boards Location.

:Uses unleaded solder.

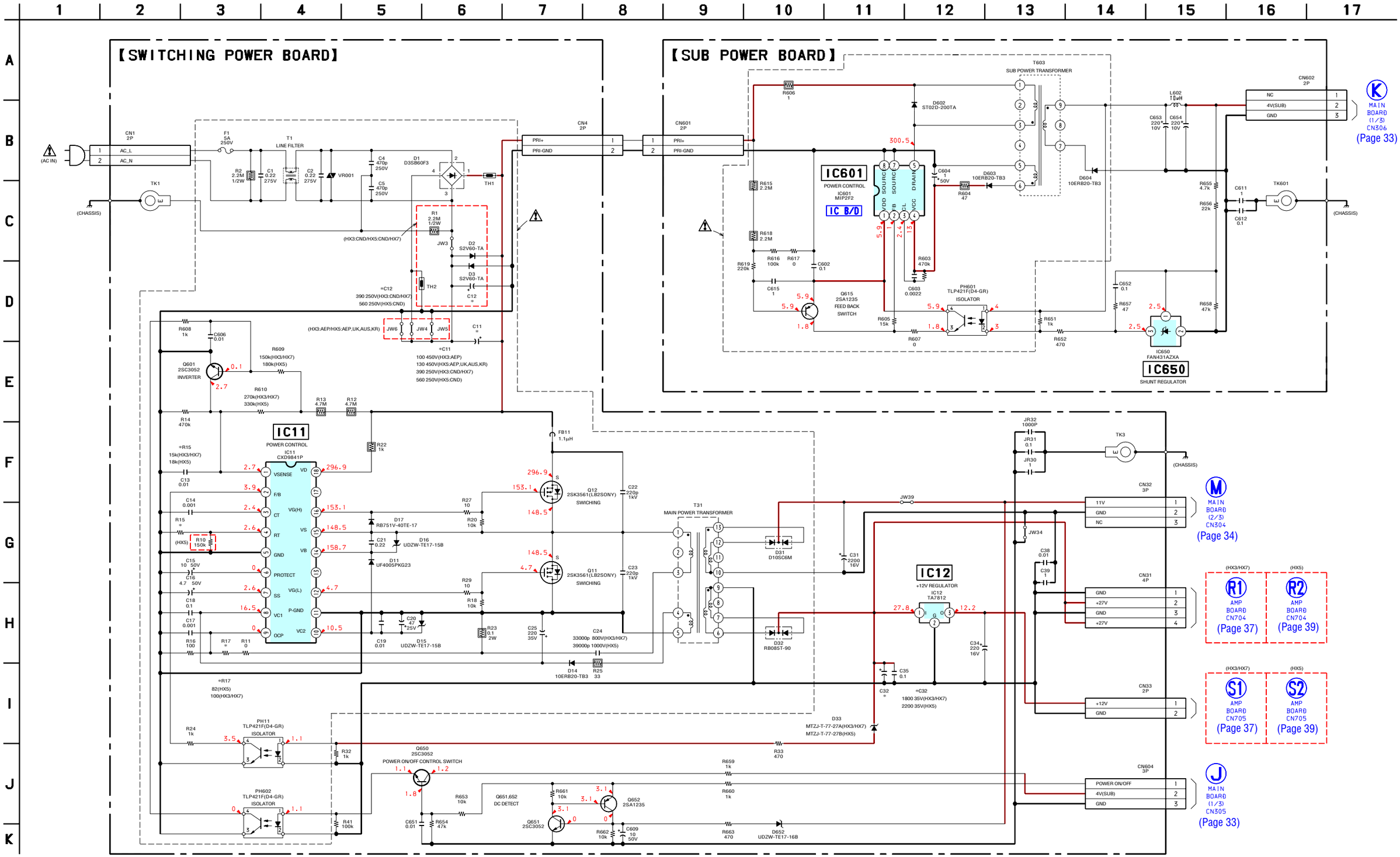
- **Semiconductor Location**

Ref. No.	Location
D1	E-3
D2	D-4
D3	F-4
D11	C-6
D14	C-7
D15	C-6
D16	C-5
D17	C-5
D31	F-9
D32	D-8
D33	B-9
D602	J-5
D603	J-5
D604	J-3
D652	F-10
IC11	C-5
IC12	C-9
IC601	J-6
IC650	J-3
PH11	B-7
PH601	J-4
PH602	B-7
Q11	E-6
Q12	F-5
Q601	B-4
Q615	K-5
Q650	G-10
Q651	H-9
Q652	G-9



6-27. SCHEMATIC DIAGRAM – POWER SUPPLY Section –

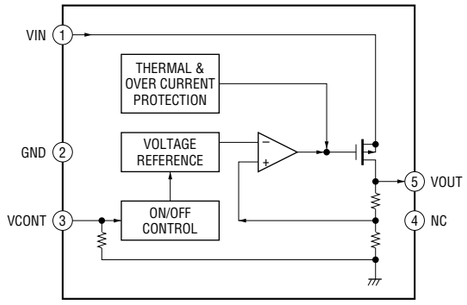
• See page 46 for IC Block Diagrams. • See page 53 for IC Pin Function Description.



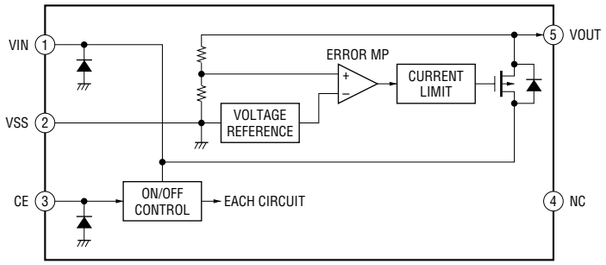
- **IC Block Diagrams**

– CD Board –

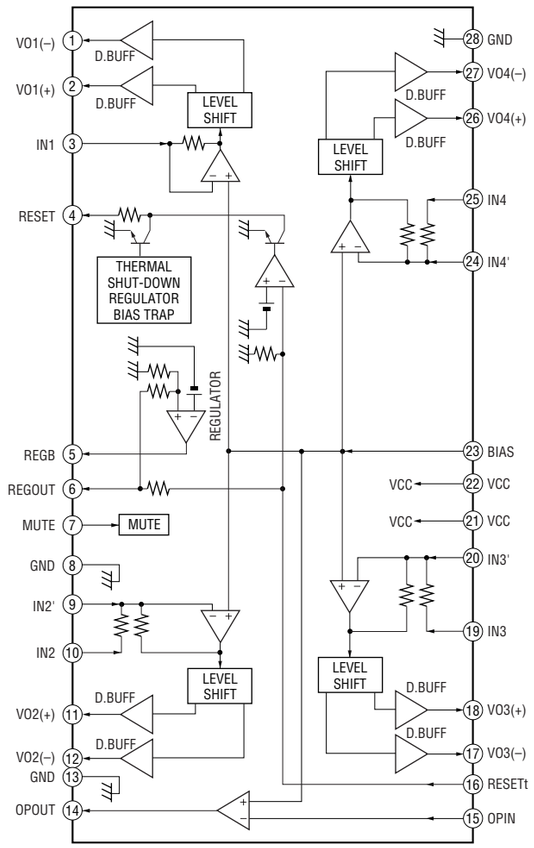
IC201 TK63115SCL-G@GT (HX7)



IC201 XC6215B152MR (HX3/HX5)

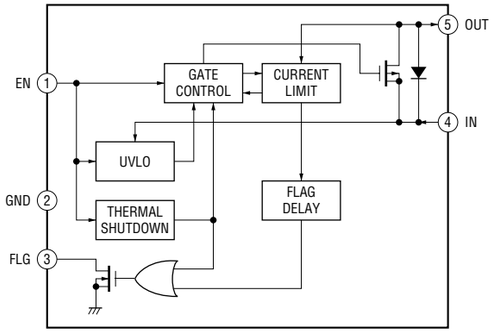


IC401 BA5826SFP-E2



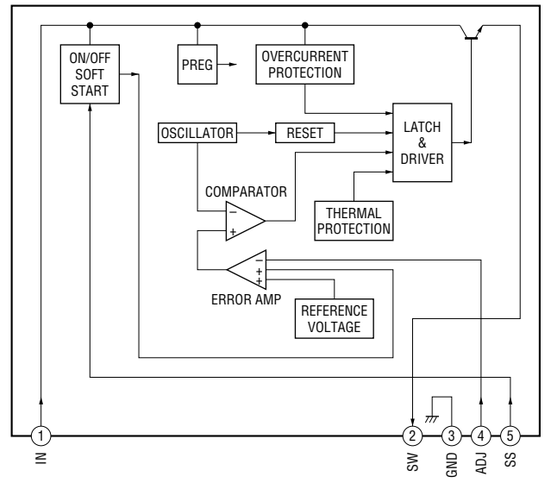
– USB Board –

IC915 R5523N001B-TR-F



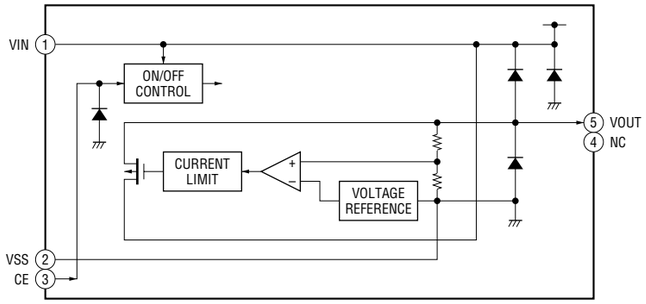
– USB POWER Board –

IC319 SI-8008TFE



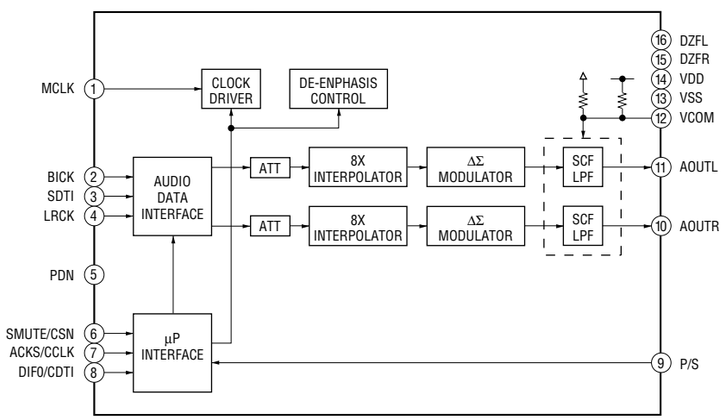
– BT Board –

IC903 XC6213B332MR



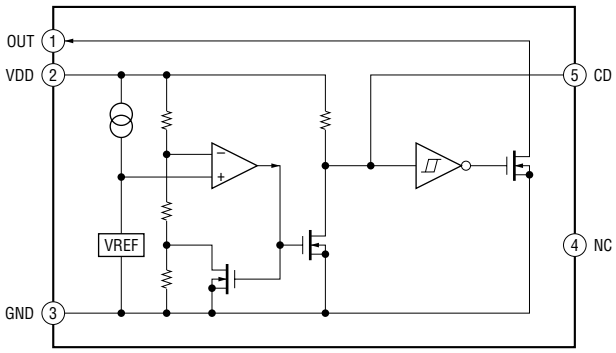
– XM Board –

IC041 AK4384ET-E2

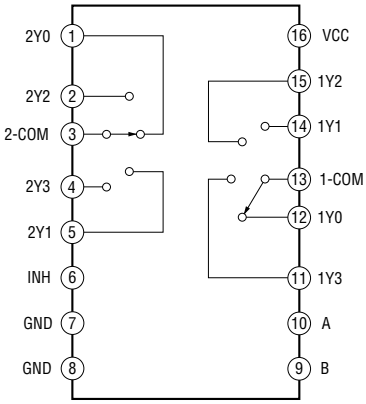


– MAIN Board –

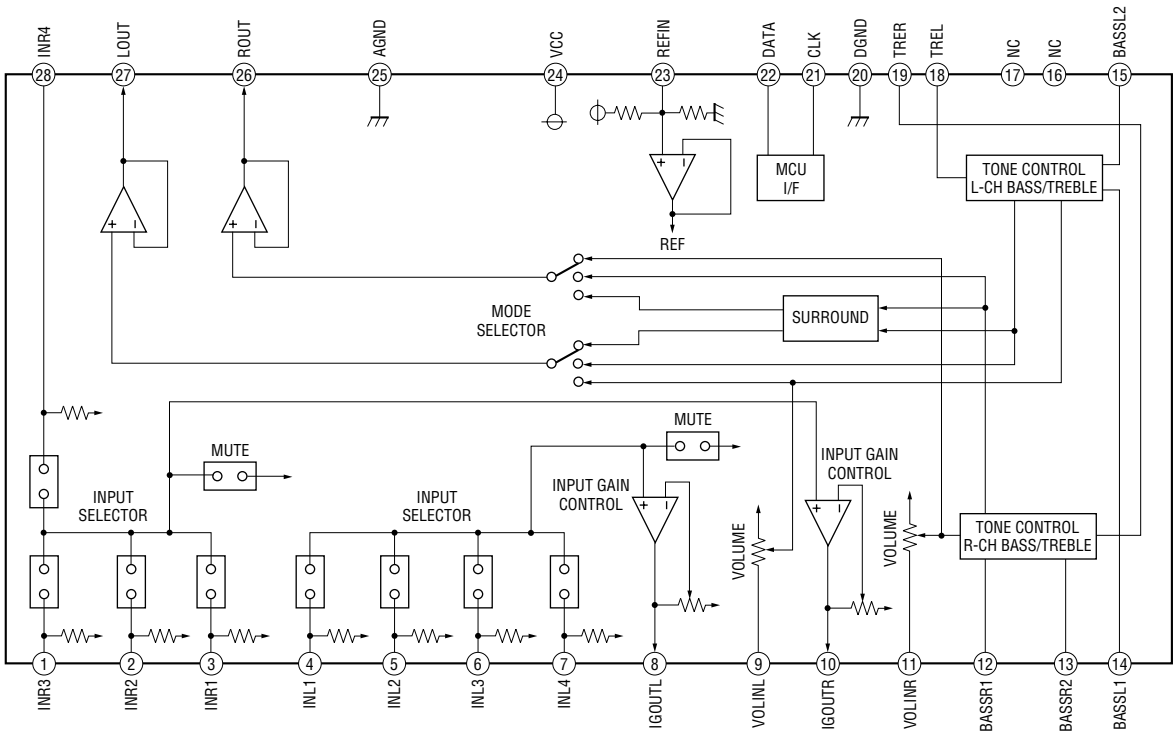
IC302 PST3629NR



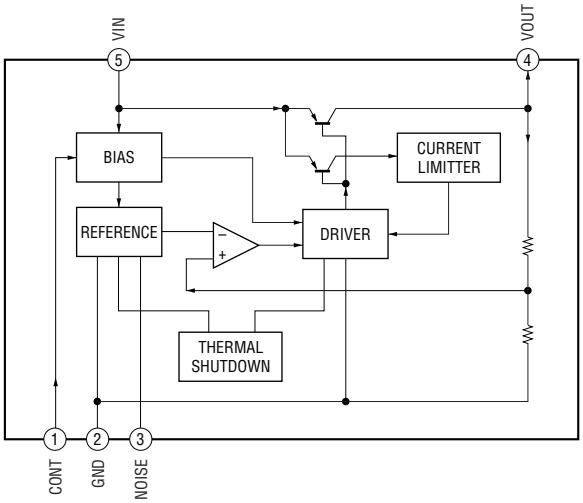
IC303, 310 MC14052BDTR2



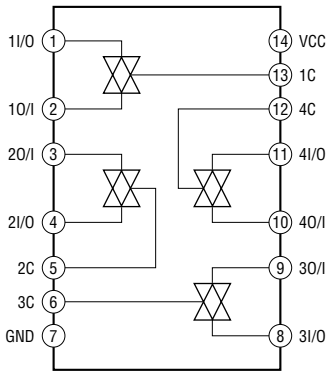
IC304 R2S15904SP



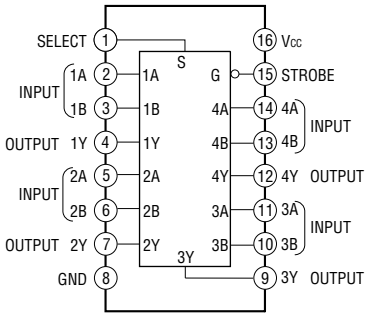
IC308 MM1615ANLE



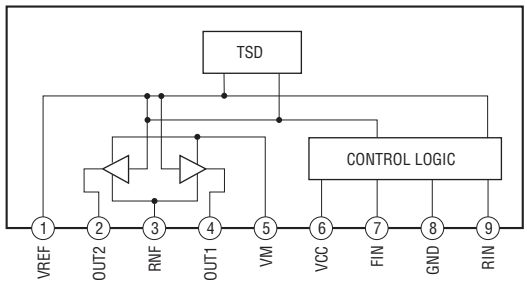
IC311, 312, 318 TC74HC4066AFT (EL)



IC313 TC74VHC157FT (EKJ)

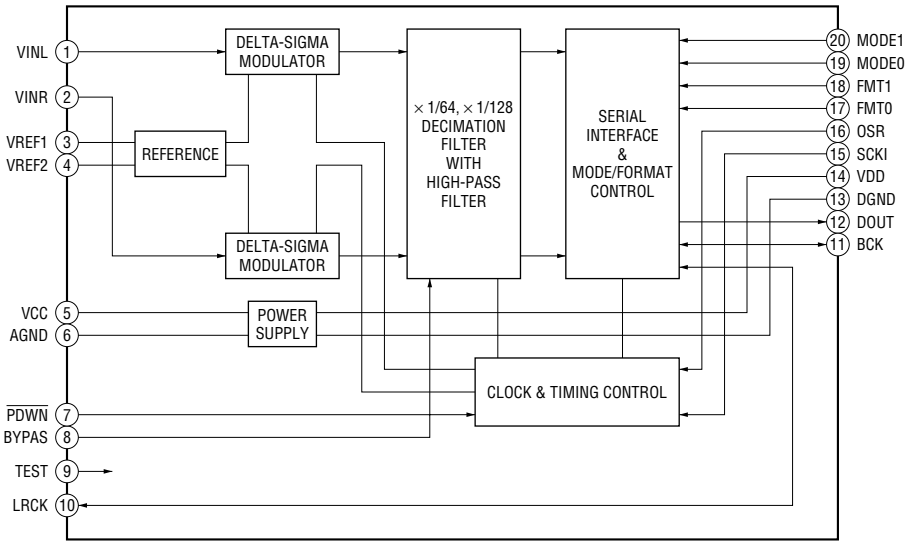


IC320 BA6956AN

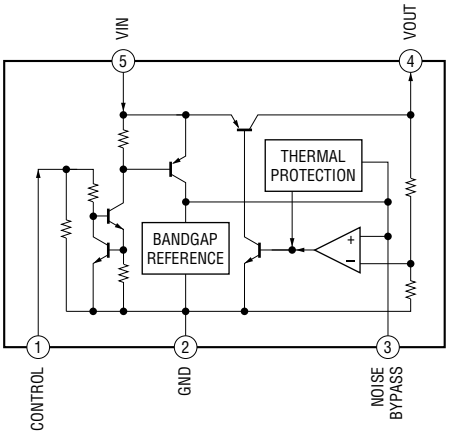


– AMP Board –

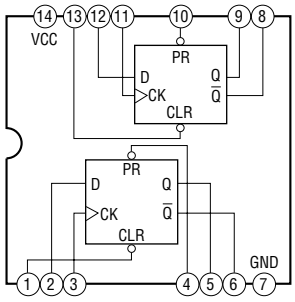
IC701 PCM1803DBR



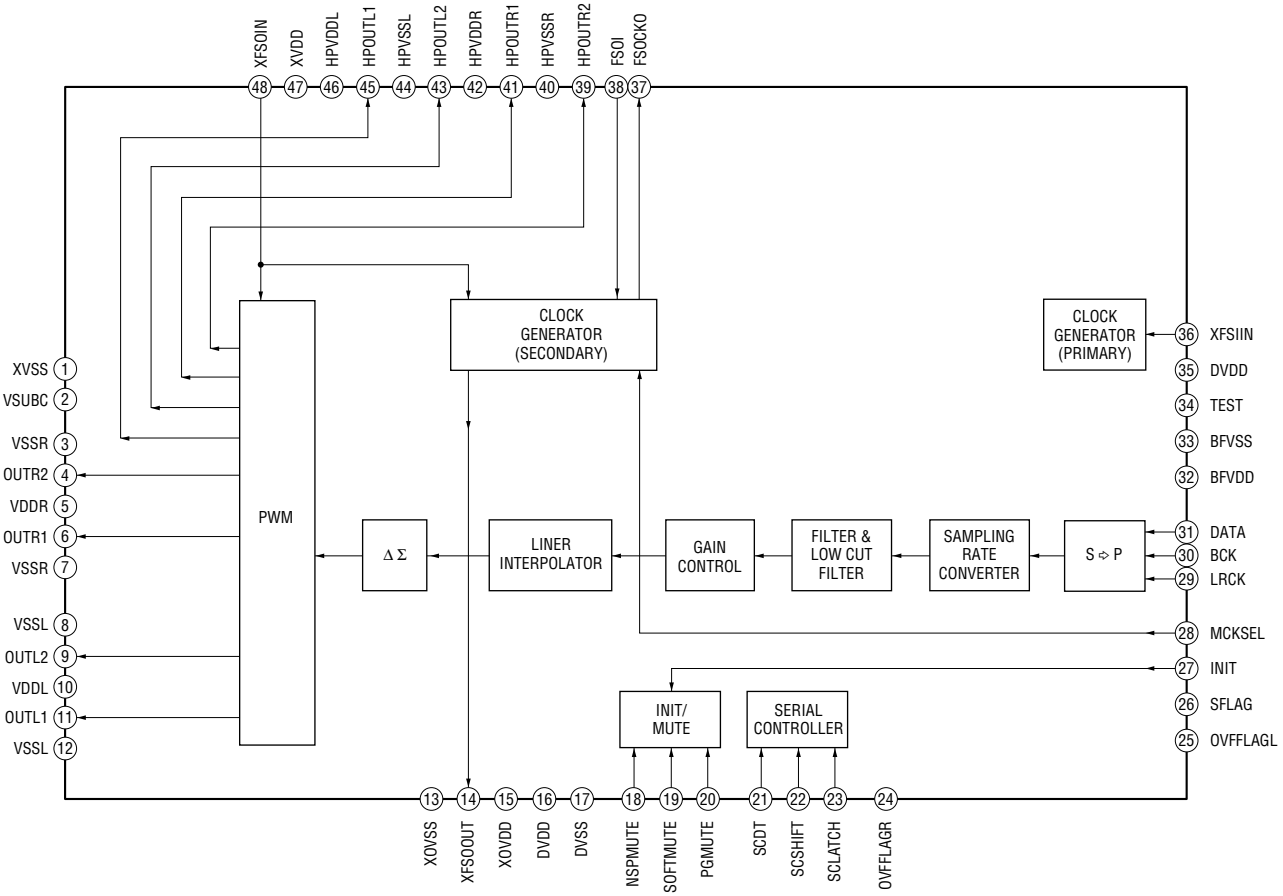
IC702 NJM2871BF33-TE2
IC704 NJM2871BF18-TE2



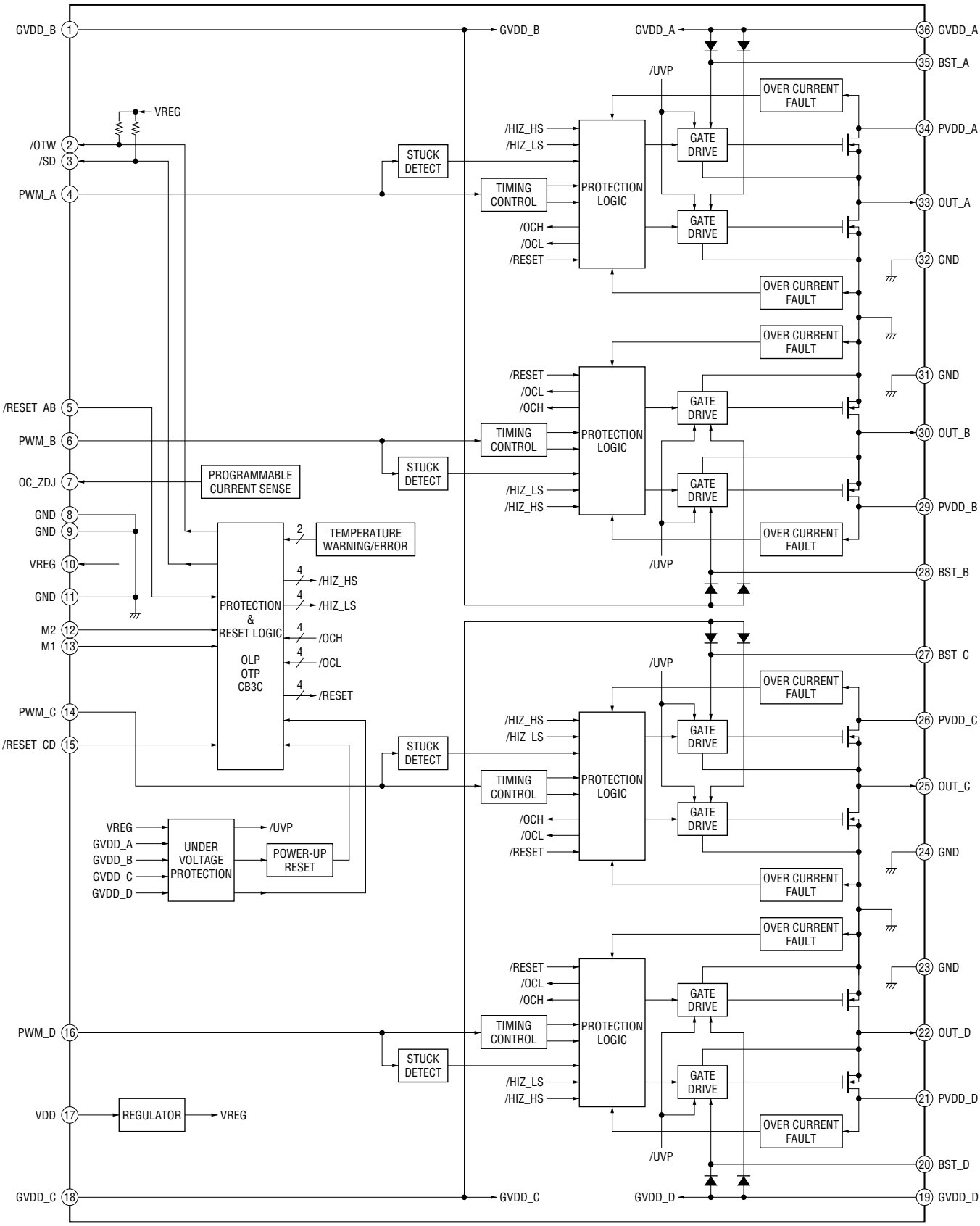
IC703 MC74VHC74DTR2



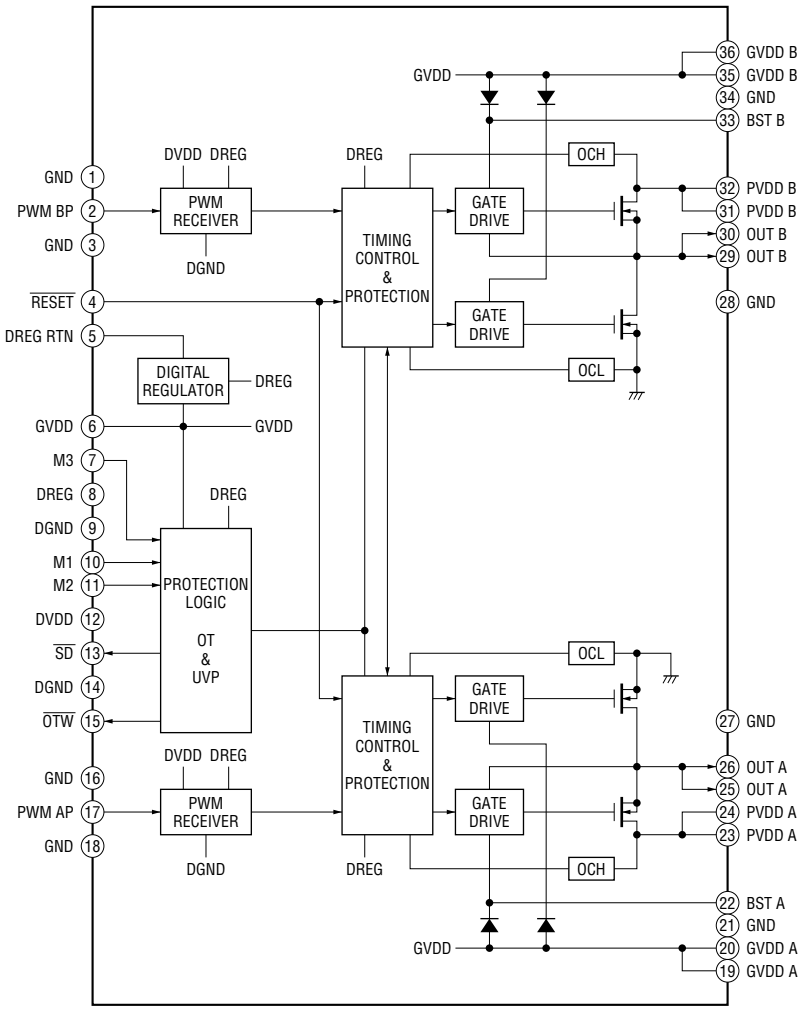
IC705 CXD9788AR



IC707 CXD9845AM (HX3/HX7)

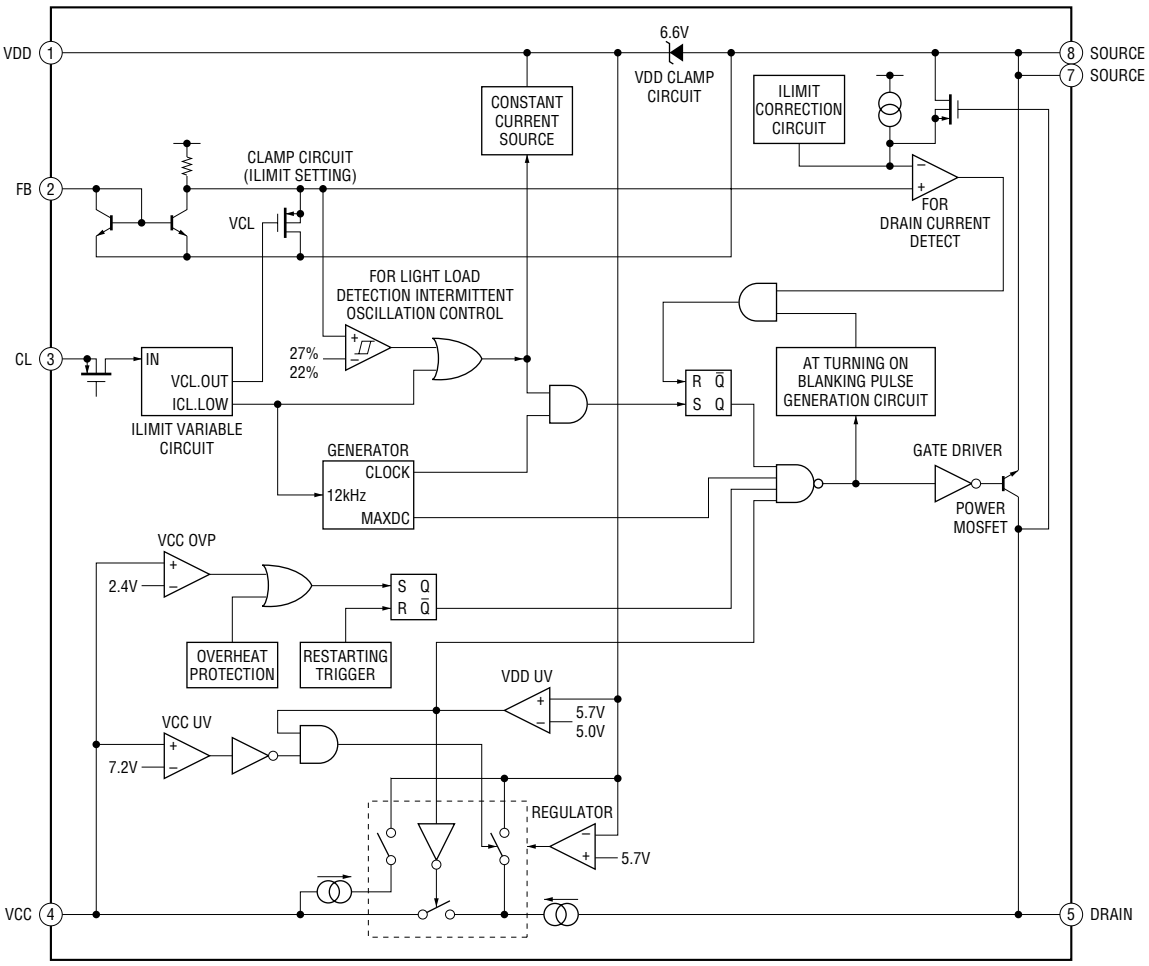


IC707, 708 CXD9774M (HX5)



– SUB POWER Board –

IC601 MIP2F20MS1SO



- **IC Pin Function Description**

CD BOARD IC101 (CD-MP3 PROCESSOR) TC94A70FG-006 (HX7),TC94A70FG-007 (S, D) (HX3/HX5)

Pin No.	Pin Name	I/O	Description
1	AVSS3	-	Ground terminal
2	RFZi	I	RF ripple zero crossing signal input terminal
3	RFRP	O	RF ripple signal output terminal
4	SBAD/RFDC	O	Sub beam addition signal or RF peak detection signal output terminal Not used
5	FEi	O	Focus error signal output terminal Not used
6	TEi	O	Tracking error signal output terminal
7	TEZi	I	Tracking error zero crossing signal input terminal
8	AVDD3	-	Power supply terminal (+3.3 V)
9	FOo	O	Focus coil drive signal output terminal
10	TRo	O	Tracking coil drive signal output terminal
11	VREF	I	Reference voltage (+1.65V) input terminal
12	FMo	O	Sled motor drive signal output terminal
13	DMo	O	Spindle motor drive signal output terminal
14	VSSP3	-	Ground terminal
15	VCOi	I	VCO control voltage input terminal
16	VDDP3	-	Power supply terminal (+3.3 V)
17	VDD1	-	Power supply terminal (+1.5 V)
18	VSS	-	Ground terminal
19	FGiN	I	FG signal input terminal Not used
20	IO0 (/HSO)	I	Disc inner position detection signal input terminal
21	IO1 (/UHSO)	O	Not used
22	XVSS3	-	Ground terminal
23	XI	I	System clock input terminal (16.9344 MHz)
24	XO	O	System clock output terminal (16.9344 MHz)
25	XVDD3	-	Power supply terminal (+3.3 V)
26	DVSS3	-	Ground terminal
27	RO	O	Audio data (R-ch) output to the input selector
28	DVDD3	-	Power supply terminal (+3.3 V)
29	DVR	O	Reference voltage (+1.65V) output terminal
30	LO	O	Audio data (L-ch) output to the input selector
31	DVSS3	-	Ground terminal
32	VDDT3	-	Power supply terminal (+3.3 V)
33	VSS1	-	Ground terminal
34	VDD1	-	Power supply terminal (+1.5 V)
35	VDDM1	-	Power supply terminal (+1.5 V)
36	SRAMSTB	I	S-RAM standby mode control signal input terminal Fixed at "L" in this set
37	XRST	I	Reset signal input from the system controller "L": reset
38, 39	BUS0, BUS1	I	Serial data input from the system controller and USB controller (HX3/HX5) Serial data input from the system controller (HX7)
40	BUS2 (SO)	I	Serial data input from the system controller and USB controller (HX3/HX5) Serial data input from the system controller (HX7)
41	BUS3 (SI)	I	Serial data input from the system controller and USB controller (HX3/HX5) Serial data input from the system controller (HX7)
42	BUCK (CLK)	I	Serial data transfer clock signal input from the system controller and USB controller (HX3/HX5) Serial data transfer clock signal input from the system controller (HX7)
43	XCCE	I	Chip enable signal input from the system controller and USB controller (HX3/HX5) Chip enable signal input from the system controller (HX7)

Pin No.	Pin Name	I/O	Description
44	TEST	I	Setting terminal for test mode Normally fixed at "L"
45	IRQ	I	Interrupt request signal input terminal Not used
46	AoUT3 (PO4)	O	Request signal output to the USB controller (HX3/HX5)
47	AoUT2 (PO5)	O	Audio data output terminal Not used
48	PIO0	O	Request signal output to the system controller and USB controller (HX3/HX5) Request signal output to the system controller (HX7)
49, 50	PIO1, PIO2	O	Not used
51	PIO3	I	Gate signal input from the USB controller (HX3/HX5)
52	VSS1	-	Ground terminal
53	VDDT3	-	Power supply terminal (+3.3 V)
54	SBSY	O	Subcode block sync signal output to the system controller
55	SBOK/FOK	O	Not used
56	IPF	O	Not used
57	SFSY/LOCK	O	Not used
58	ZDET	O	Zero detection signal output terminal Not used
59	GPIN	I	Not used
60	MS	I	Microcomputer interface mode selection signal input terminal Fixed at "H" in this set
61	DOUT (PO6)	O	Digital audio data output terminal Not used
62	AOUT (PO7)	O	Audio data output terminal Not used
63	BCK (PO8)	O	Bit clock signal output terminal Not used
64	LRCK (PO9)	O	L/R sampling clock signal output terminal Not used
65	AIN (PI4)	I	Digital audio data input from USB controller (HX3/HX5)
66	BCKi (PI5)	I	Bit clock signal input from the USB controller (HX3/HX5)
67	LRCKi (PI6)	I	L/R sampling clock signal input from the USB controller (HX3/HX5)
68	VDD1	-	Power supply terminal (+1.5 V)
69	VSS	-	Ground terminal
70	AWRC	-	Not used
71	PVDD3	-	Power supply terminal (+3.3 V)
72	PDO	O	Phase error margin signal between EFM signal and PLCK signal output terminal
73	TMAXS	O	TMAX detection signal output terminal Not used
74	TMAX	O	TMAX detection signal output terminal
75	LPFN	I	Inverted signal input from the operation amplifier for PLL loop filter
76	LPFo	O	Signal output from the operation amplifier for PLL loop filter
77	PVREF	I	Reference voltage (+1.65V) input terminal
78	VCOF	O	VCO filter output terminal
79	PVSS3	-	Ground terminal
80	SLCo	O	EFM slice level output terminal
81	RFi	I	RF signal input terminal
82	RFRPi	I	RF ripple signal input terminal
83	RFEQo	O	EFM slice level output terminal
84	VRo	O	Reference voltage (+1.65V) output terminal
85	RESiN	O	External resistor connection terminal
86	VMDiR	O	Reference voltage (+1.65V) output terminal for automatic power control circuit
87	TESTR	O	Low-pass filter terminal for RFEQO offset correction
88	AGCi	I	RF signal amplitude adjustment amplification input terminal
89	RFo	O	RF signal generation amplification output terminal
90	RVDD3	-	Power supply terminal (+3.3 V)

Pin No.	Pin Name	I/O	Description
91	LDo	O	Laser diode on/off control signal output to the automatic power control circuit "H": laser diode on
92	MDi	I	Light amount monitor input from the laser diode of optical pick-up block
93	RVSS3	-	Ground terminal
94	FNi2 (C)	I	Main beam (C) input from the optical pick-up block
95	FNi1 (A)	I	Main beam (A) input from the optical pick-up block
96	FPi2 (D)	I	Main beam (D) input from the optical pick-up block
97	FPi1 (B)	I	Main beam (B) input from the optical pick-up block
98	TPi (F)	I	Sub beam (F) input from the optical pick-up block
99	TNPC	O	External capacitor connection terminal
100	TNi (E)	I	Sub beam (E) input from the optical pick-up block

USB BOARD IC901 TMP92CD28FG-2CB2 (USB CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	/RESET	I	Reset signal input from the system controller "L": reset
2	DI	I	Ready to send signal input from the system controller
3, 4	NO USE	O	Not used
5	G-3	I	Function selection signal input terminal Fixed at "L" in this set
6	DVCC	-	Power supply terminal (+3.3 V)
7 to 9	NO USE	O	Not used
10	DVSS	-	Ground terminal
11	DVCC	-	Power supply terminal (+3.3 V)
12	RVOUT1	O	Reference voltage (+3.3 V) output terminal
13, 14	RVIN	I	Reference voltage (+3.3 V) input terminal
15	RVOUT2	O	Reference voltage (+3.3 V) output terminal
16	DVCC	-	Power supply terminal (+3.3 V)
17	DVSS	-	Ground terminal
18 to 25	D0 to D7	I/O	Two-way data bus with the S-RAM
26	DVSS	-	Ground terminal
27	DVCC	-	Power supply terminal (+3.3 V)
28 to 35	D8 to D15	I/O	Two-way data bus with the S-RAM
36	A0	O	Address signal output terminal Not used
37 to 43	A1 to A7	O	Address signal output to the S-RAM
44	DVSS	-	Ground terminal
45	DVCC	-	Power supply terminal (+3.3 V)
46 to 54	A8 to A16	O	Address signal output to the S-RAM
55 to 58	BUS0 to BUS3	O	Serial data output to the CD-MP3 processor
59	/BUCK	O	Serial data transfer clock signal output to the CD-MP3 processor
60	/CCE	O	Chip enable signal output to the CD-MP3 processor
61	NO USE	O	Not used
62	DVSS	-	Ground terminal
63	DVCC	-	Power supply terminal (+3.3 V)
64	RD	O	Output enable signal output to the S-RAM
65	WR	O	Write enable signal output to the S-RAM
66	SRLLB	O	Lower-byte control signal output to the S-RAM
67	SRLUB	O	Upper-byte control signal output to the S-RAM
68	NO USE	O	Not used
69	BOOT	I	Boot mode selection signal input terminal "L": boot mode
70	CS2	I	Chip select signal output to the S-RAM
71	LRCK	O	L/R sampling clock signal output to the CD-MP3 processor
72	AM1	I	Function mode selection signal input terminal Fixed at "H" in this set
73	X2	O	System clock output terminal (9 MHz)
74	DVSS	-	Ground terminal
75	X1	I	System clock input terminal (9 MHz)
76	DVCC	-	Power supply terminal (+3.3 V)
77	USBOC	I	Over current detection signal input terminal
78	USBPON	O	USB VBUS power on/off control signal output terminal "H": power on
79	D+	I/O	Two-way data (positive) bus with the USB connector
80	D-	I/O	Two-way data (negative) bus with the USB connector
81	AM0	I	Function mode selection signal input terminal Fixed at "H" in this set

Pin No.	Pin Name	I/O	Description
82	NO USE	O	Not used
83	DVSS	-	Ground terminal
84	DO	O	Clear to send signal output to the system controller
85	DATA	O	Serial data output terminal Not used
86	CLOCK	O	Serial data transfer clock signal output terminal Not used
87	TXD1	O	Serial data output to the system controller
88	RXD1	I	Serial data input from the system controller
89	NO USE	O	Not used
90	SDA	I/O	Two-way EEPROM IIC data bus terminal Not used
91	SCL	I/O	Two-way EEPROM IIC clock bus terminal Not used
92	BCK	O	Bit clock signal output to the CD-MP3 processor
93	DATA	O	Audio data output to the CD-MP3 processor
94	GATE	O	Gate signal output to the CD-MP3 processor
95	DVCC	-	Power supply terminal (+3.3 V)
96	REQ	I	Request signal input from the CD-MP3 processor
97	ST-REQ	I	Request signal input from the CD-MP3 processor
98, 99	G-1, G-2	I	Function selection signal input terminal Fixed at "L" in this set
100	DVSS	-	Ground terminal

XM BOARD IC001 F2602E-01-TR (XM RECEIVER)

Pin No.	Pin Name	I/O	Description
1	LSDP_TXRX	-	Not used
2	VSS	-	Ground terminal
3	SC_XT_OUT	O	Serial data output to the system controller
4	VDD	-	Power supply terminal (+3.3V)
5	SC_RX_IN	I	Serial data input from the system controller
6	VSS	-	Ground terminal
7	CDM_SEL	I	Command mode selection signal input terminal Not used
8	VDD	-	Power supply terminal (+3.3V)
9	ERR_IRQ#	O	Interrupt request signal output terminal Not used
10	VSS	-	Ground terminal
11	RST#	I	Reset signal input from the system controller "L": reset
12	SLAVE_SEL	I	Master/slave mode selection signal input terminal "L": master mode, "H": slave mode Fixed at "L" in this set
13	COMM_RX_DIG	-	Not used
14	COMM_TX_DIG	-	Not used
15	COMM_TX_EN	-	Not used
16	VSS	-	Ground terminal
17	VDD	-	Power supply terminal (+3.3V)
18	CDMM_RX_P	I	XM receiver differential signal (positive) input terminal
19	CDMM_RX_N	I	XM receiver differential signal (negative) input terminal
20	VDD	-	Power supply terminal (+3.3V)
21	VSS	-	Ground terminal
22	CDMM_TX_N	O	XM transmitter differential signal (negative) output terminal
23	CDMM_TX_P	O	XM transmitter differential signal (positive) output terminal
24, 25	VSS	-	Ground terminal
26	OSC_OUT	O	System clock output terminal (45.158 MHz)
27	VSS	-	Ground terminal
28	OSC_IN	I	System clock input terminal (45.158 MHz)
29	VSS	-	Ground terminal
30	TEST	-	Not used
31	VSS	-	Ground terminal
32	HSDP_DA	-	Not used
33	VDD	-	Power supply terminal (+3.3V)
34	HSDP_CLK	-	Not used
35	VSS	-	Ground terminal
36	HSDP_EN	-	Not used
37	I2S_DA	O	I2S digital audio data output to the D/A converter
38	VSS	-	Ground terminal
39	I2S_CLK	O	I2S bit clock signal output to the D/A converter
40	VDD	-	Power supply terminal (+3.3V)
41	I2S_LRCLK	O	I2S L/R sampling clock signal output to the D/A converter
42	VSS	-	Ground terminal
43	I2S_OCLK	O	I2S over sample clock signal output to the D/A converter
44	VSS	-	Ground terminal
45	SAII_CLK	-	Not used
46	VDD	-	Power supply terminal (+3.3V)

Pin No.	Pin Name	I/O	Description
47	SAII_DA	-	Not used
48	SAII_EN	-	Not used

MAIN BOARD IC301 M3062LFGPFP-710 (HX3/HX5), M3062LFGPFP-712 (HX7) (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 3	CD BUS2 to CD BUS0	O	Serial data output to the CD-MP3 processor
4	SIRCS	I	SIRCS signal input from the remote control receiver
5	DEC BUS SEL2	O	Data selection signal output terminal Not used
6	DEC BUS SEL1	O	Data selection signal output terminal (HX3/HX5)
7	S-MASTER SOFT MUTE	O	Soft muting control signal output to the stream processor
8	BYTE	I	External data bus width selection signal input terminal
9	CN VSS	I	Processor mode switch input terminal (for test)
10	XCIN	I	Sub system clock input terminal (32.768 kHz)
11	XCOUT	O	Sub system clock output terminal (32.768 kHz)
12	RESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (5 MHz)
14	VSS	-	Ground terminal
15	XIN	I	Main system clock input terminal (5 MHz)
16	VCC	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt signal input terminal Not used
18	RDS INT	I	RDS data transfer clock signal input from the tuner (FM/AM) (HX3: AEP/HX5: AEP, UK)
19	SBSY	I	Subcode block sync signal input from the CD-MP3 processor
20	AC CUT	I	AC cut on/off detection signal input terminal "L": AC cut on
21	CD ON	O	Power on/off control signal output terminal for CD section "H": power on
22	CD DRIVE MUTE	O	Muting signal output to the coil/motor driver
23	CD CLK	O	Serial data transfer clock signal output to the CD-MP3 processor
24	CD CCE	O	Chip enable signal output to the CD-MP3 processor
25	CD XRST	O	Reset signal output to the CD-MP3 processor "L": reset
26	MP3 IREQ	I	Request signal input from the CD-MP3 processor
27	USB RESET	O	Reset signal output to the USB controller "L": reset (HX3/HX5)
28	USB POWER	O	Power on/off control signal output terminal for USB section "H": power on (HX3/HX5)
29	IIC CLK	I/O	Two-way IIC clock bus terminal Not used
30	IIC DATA	I/O	Two-way IIC data bus terminal Not used
31	BT_DOUT/ DAB TXD	O	Serial data output to the bluetooth module (HX5/HX7)
32	BT_DIN/ DAB RXD	O	Serial data input from the bluetooth module (HX5/HX7)
33	S-MASTER LATCH	O	Serial data latch pulse signal output to the stream processor
34	BT_RTS	O	Ready to send signal output to the bluetooth module (HX5/HX7)
35	USB TXD/ SAT TXD	O	Serial data output to the USB controller (HX3/HX5) Serial data output to the XM receiver and SIRIUS socket (HX7)
36	USB RXD/ SAT RXD	I	Serial data input from the USB controller (HX3/HX5) Serial data input from the XM receiver and SIRIUS socket (HX7)
37	USB_CTS	I	Clear to send signal input from the USB controller (HX3/HX5)
38	USB_RTS	O	Ready to send signal output to the USB controller (HX3/HX5)
39	S-MASTER INIT	O	Initialize signal output to the stream processor
40	S-MASTER NSP MUTE	O	NSP muting control signal output to the stream processor
41	PULL DOWN	O	Connected to the ground

Pin No.	Pin Name	I/O	Description
42	S-MASTER SHIFT	O	Serial data transfer clock signal output to the stream processor
43	S-MASTER DATA	O	Serial data output to the stream processor
44	S-MASTER SD	I	Shut down signal input from the digital power amplifier "L": shut down
45	S-MASTER RST	O	Reset signal output to the digital power amplifier "L": reset
46	PULL UP	O	Connected to the power supply
47	S-MASTER PG MUTE	O	PG muting control signal output to the stream processor
48	CDM LOAD OUT	O	Loading motor control signal output terminal (for loading out)
49	CDM LOAD IN	O	Loading motor control signal output terminal (for loading in)
50	CDM OPEN SW	I	Disc tray open position detection signal input terminal
51	CDM CLOSE SW	I	Disc tray close position detection signal input terminal
52	HP MUTE	O	Headphone muting on/off control signal output terminal "H": muting on
53	BT AUD OUT MUTE	O	Blutetooth muting on/off control signal output terminal "H": muting on (HX5/HX7)
54	TA LINE-MUTE	O	Line muting on/off control signal output terminal "H": muting on
55	AMP DATA	O	Serial data output to the electrical volume
56	AMP CLOCK	O	Serial data transfer clock signal output to the electrical volume
57	SEL A	O	Input selection control signal output terminal (HX7)
58	SEL B	O	Input selection control signal output terminal (HX7)
59	SEL INH	O	Input selection control signal output terminal (HX7)
60	BT_AV_ ROLE	O	Transmission/reception mode notification signal output to the bluetooth module (HX5/HX7)
61	BT_CTS	I	Clear to send signal input from the bluetooth module (HX5/HX7)
62	VCC	-	Power supply terminal (+3.3V)
63	BT RESET	O	Reset signal output to the bluetooth module "L": reset (HX5/HX7)
64	VSS	-	Ground terminal
65	BT POWER	O	Power on/off control signal output terminal for bluetooth section "H": power on (HX5/HX7)
66	MODEL IN	I	Setting terminal for the model
67	SPEC IN	I	Setting terminal for the destination
68	HP DET	I	Plug insert detection signal input terminal for PHONES jack "L": plug insert
69	AUDIO IN DET	I	Plug insert detection signal input terminal for AUDIO IN jack "L": plug insert
70	FL POWER ON	O	Power on/off control signal output terminal for fluorescent indicator tube "H": power on
71	FL SCLK	O	Shift clock signal output to the fluorescent indicator tube
72	FL CS	O	Chip select signal output to the fluorescent indicator tube
73	FL SD	O	Serial data output to the fluorescent indicator tube
74	KEY WAKE UP	I	Wake up signal input terminal
75	FL RESET	O	Reset signal output to the fluorescent indicator tube "L": reset
76	USB LED	O	LED drive signal output terminal for USB MEMORY indicator "H": LED on (HX3)
77	BT LED	O	LED drive signal output terminal for BLUETOOTH indicator "H": LED on (HX5/HX7)
78	STBY LED	O	LED drive signal output terminal for STANDBY indicator "H": LED on
79	NC	O	Not used
80	STBY RELAY	O	Sub power on/off control signal output terminal "H": power on
81 to 83	KEY2 to KEY0	I	Top and front panel key input terminal (A/D input)
84	VOLUME JOG	I	Jog dial pulse input from the rotary encoder (VOLUME) (A/D input)
85	AC DET	I	AC power detection signal input terminal
86	RDS DATA	I	RDS data input from the tuner (FM/AM) (HX3: AEP/HX5: AEP, UK)
87	ST CE	O	Chip enable signal output to the tuner (FM/AM)
88	ST DATA IN /STEREO	I	Serial data and stereo detection signal input from the tuner (FM/AM)

Pin No.	Pin Name	I/O	Description
89	ST CLK	O	Serial data transfer clock signal output to the tuner (FM/AM)
90	ST DATA OUT	O	Serial data output to the tuner (FM/AM)
91	XM RESET	O	Reset signal output to the XM receiver "L": reset (HX7)
92	XM_PWR _3.3V/5V	O	Power on/off control signal output terminal for XM section "H": power on (HX7)
93	SAT SEL	O	XM/SIRIUS mode selection signal output terminal "L": SIRIUS mode, "H": XM mode (HX7)
94	SR_POWER	O	Power on/off control signal output terminal for SIRIUS "H": power on (HX7)
95	DAB_PWR_3.3V	O	Power (+3.3V) on/off control signal output terminal for DAB section Not used
96	AVSS	-	Ground terminal
97	DAB_PWR_5V	O	Power (+5V) on/off control signal output terminal for DAB section Not used
98	VREF	I	Reference voltage (+3.3V) input terminal
99	AVCC	-	Power supply terminal (+3.3V)
100	CD BUS3	O	Serial data output to the CD-MP3 processor

SWITCHING POWER BOARD IC11 CXD9841P (POWER CONTROL)

Pin No.	Pin Name	I/O	Description
1	VSENSE	I	AC line voltage detection signal input terminal
2	F/B	I	Feed back signal input terminal for frequency modulation of oscillator
3	CT	I	Connected to the external capacitor for oscillator duty/frequency setting
4	RT	I	Connected to the external resistor for oscillator frequency setting
5	GND	-	Ground terminal
6	PROTECT	I	Connected to the external capacitor for determines intermittent operation period when abnormal detection state
7	SS	I	Connected to the external capacitor for soft start timing
8	VC1	I	Power supply terminal for control circuit "L": stop
9	OCP	I	Over current detection signal and didt protection signal input terminal
10	VC2	O	Power supply output terminal for driver
11	P-GND	-	Ground terminal for low voltage side driver
12	VG (L)	O	Low voltage side driver drive signal output terminal
13	-	-	Not used
14	VB	O	Power supply output terminal for high voltage side driver
15	VS	I	High voltage side driver reference voltage input terminal
16	VG (H)	O	High voltage side driver drive signal output terminal
17	-	-	Not used
18	VD	I	Terminal for drain-kick starting When starting, current is supplied directly from the rectification diode to VC1

SECTION 7
EXPLODED VIEWS

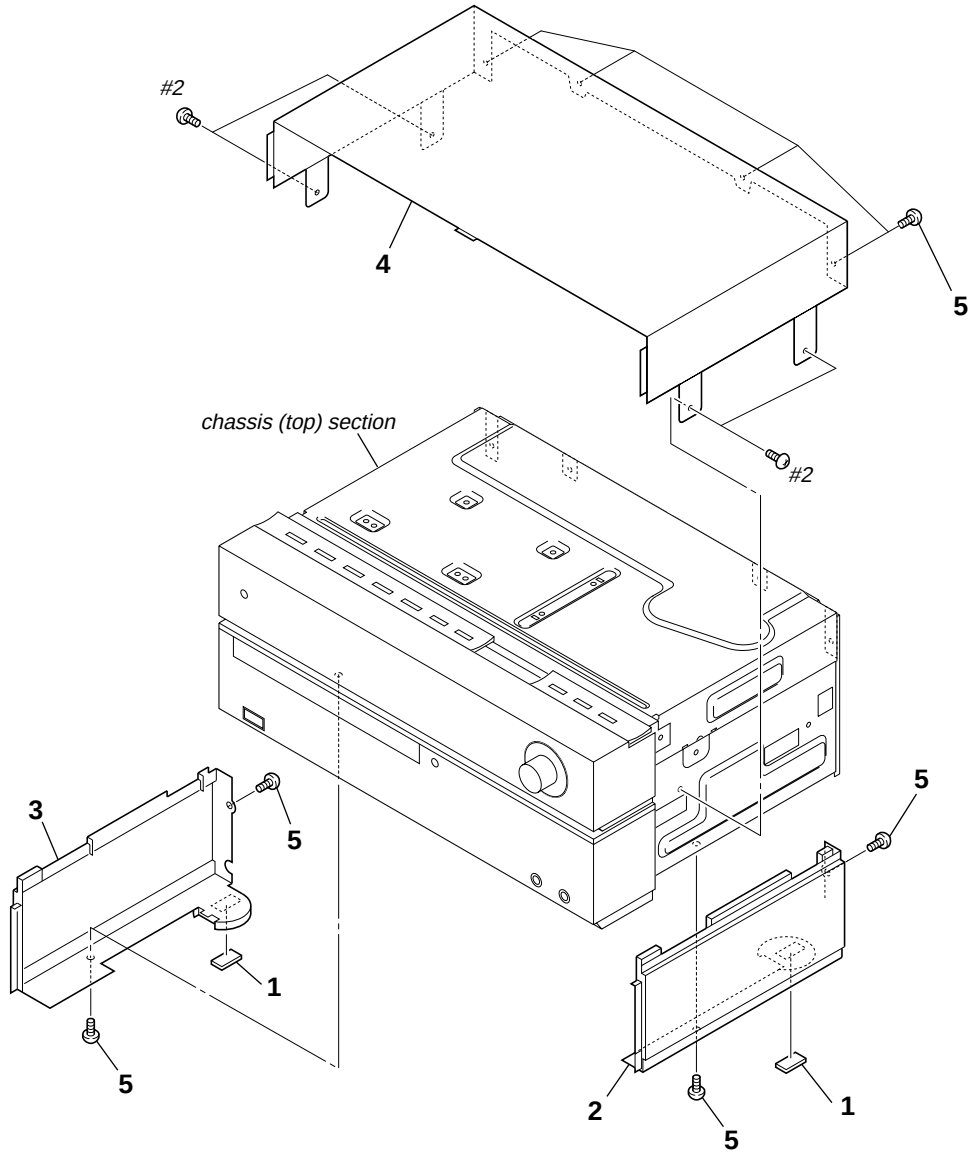
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  KR : Korean model
  SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

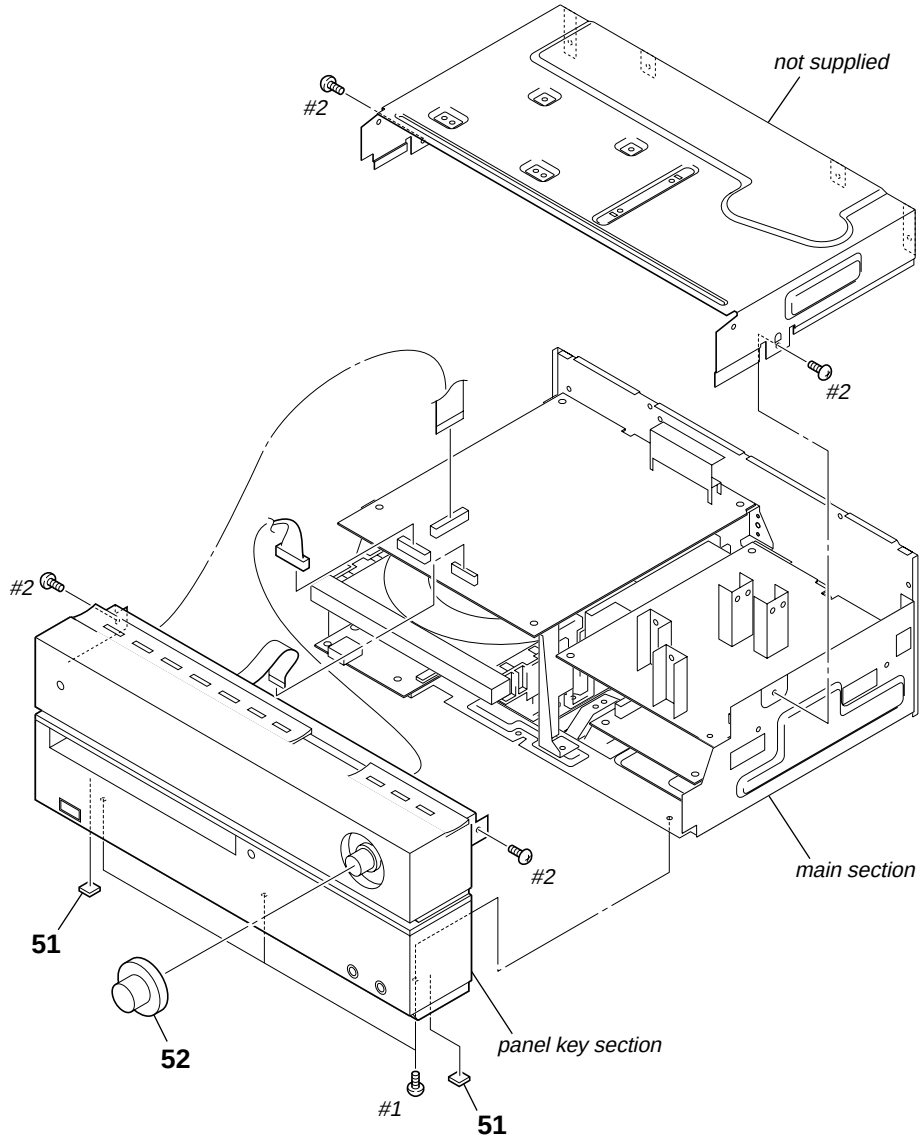
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	3-198-753-11	FOOT (FELT)	
2	2-895-132-01	PANEL (SIDE R) (HX3/HX5)	
2	2-895-132-11	PANEL (SIDE R) (HX7)	
3	2-895-131-01	PANEL (SIDE L) (HX3/HX5)	
3	2-895-131-11	PANEL (SIDE L) (HX7)	
4	2-895-129-01	PANEL (TOP) (HX3: AEP/HX5: AEP, UK)	
4	2-895-129-11	PANEL (TOP) (HX3: CND/HX5: CND, AUS, KR)	
4	2-895-129-21	PANEL (TOP) (HX7)	
5	7-685-871-01	SCREW +BVTT 3X6 (S) (HX3/HX5)	
5	7-685-871-09	SCREW +BVTT 3X6 (S) (HX7)	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

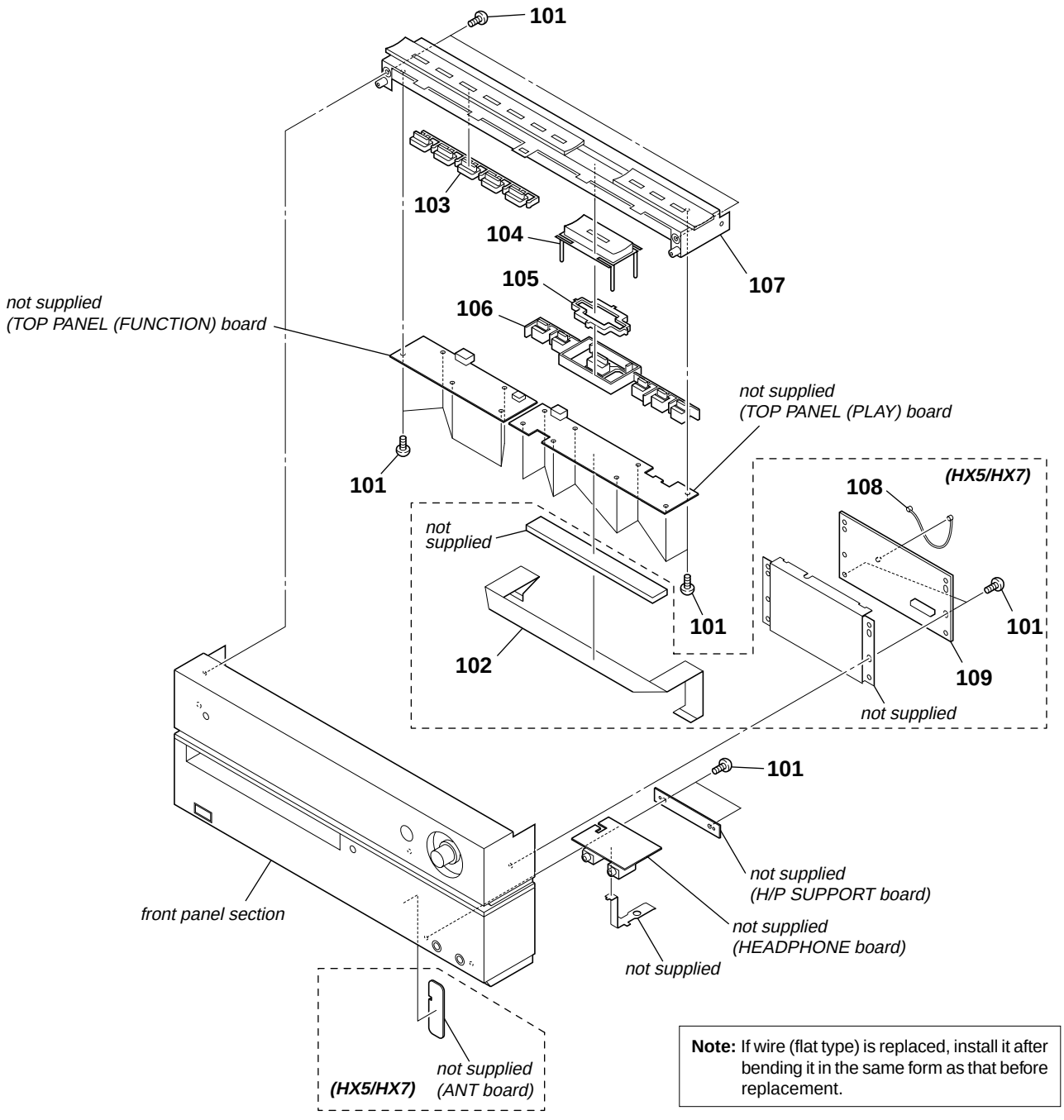
7-2. CHASSIS (TOP) SECTION



Ref. No.	Part No.	Description	Remark
51	3-198-753-01	FOOT (FELT)	
52	2-895-152-01	KNOB (VOL)	

Ref. No.	Part No.	Description	Remark
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-3. PANEL KEY SECTION

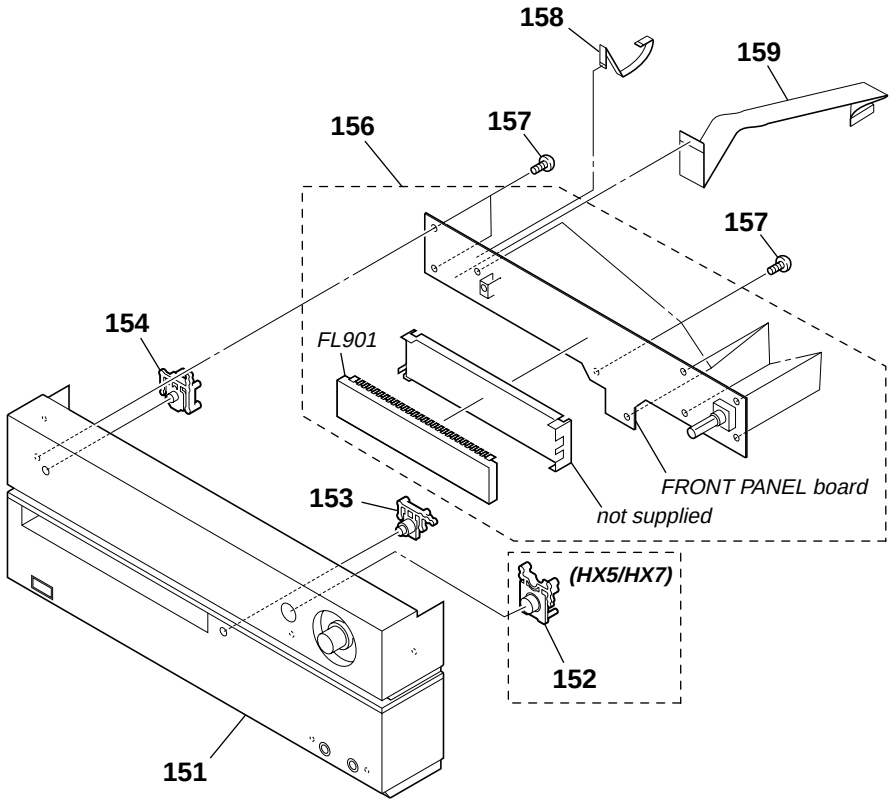


Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
101	3-087-053-01	+BVTP2.6 (3CR)	
102	1-832-589-21	CABLE, FLEXIBLE FLAT (15 CORE) (HX5/HX7)	
103	2-895-142-01	BUTTON (FUNCTION)	
104	2-895-143-01	BUTTON (FOLDER) (HX3/HX5)	
104	2-895-143-11	BUTTON (FOLDER) (HX7)	
105	2-895-153-01	BASE (FOLDER)	
106	2-895-144-01	BUTTON (ENTER)	

Ref. No.	Part No.	Description	Remark
107	2-895-133-01	PANEL (KEY) (HX3)	
107	2-895-133-21	PANEL (KEY) (HX5)	
107	2-895-133-31	PANEL (KEY) (HX7)	
108	1-834-115-11	CABLE, COAXIAL (WITH U.F.L CONNECTOR)	(HX5/HX7)
109	A-1236-563-A	BT BOARD, COMPLETE (HX5/HX7)	

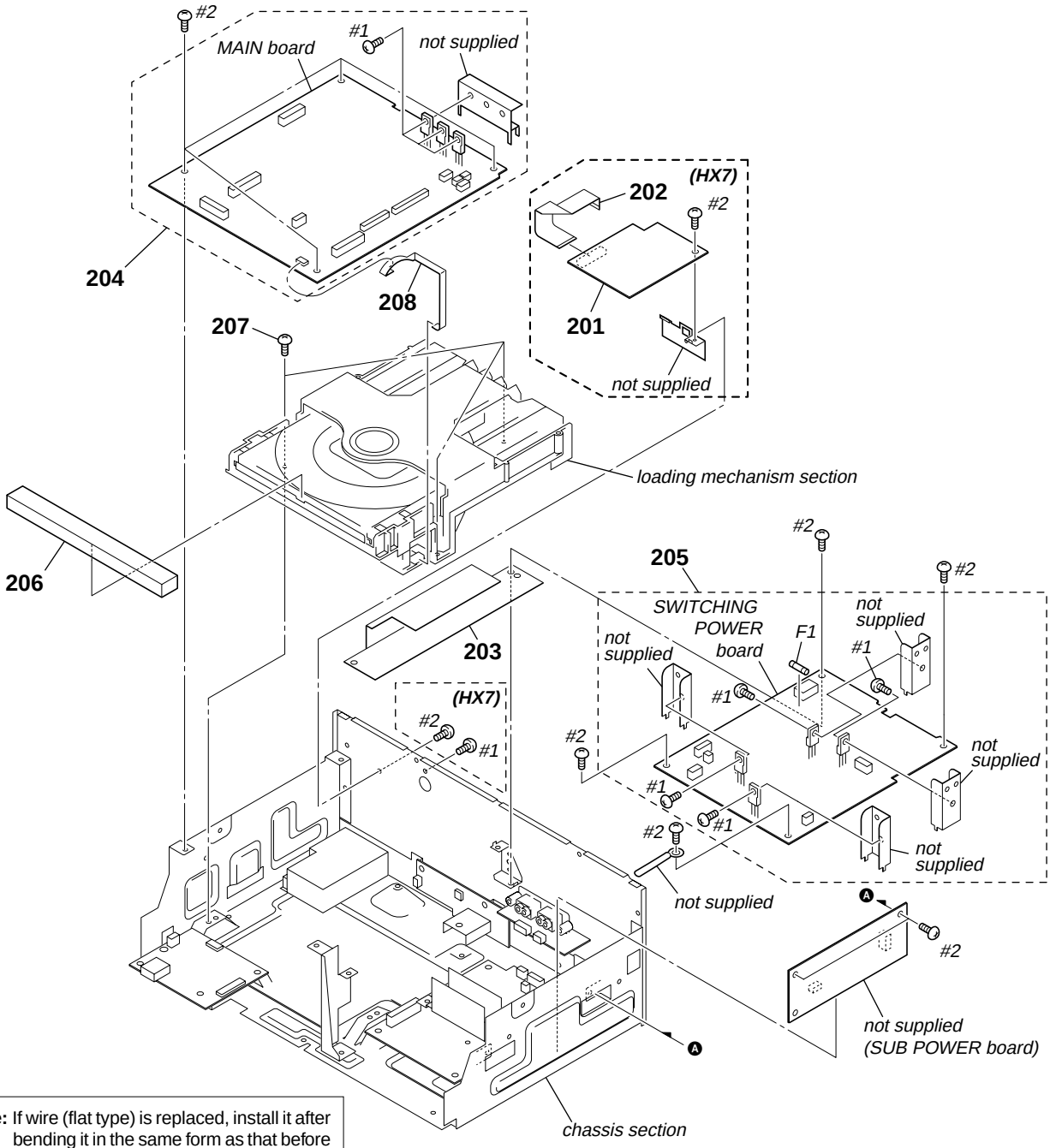
7-4. FRONT PANEL SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
151	X-2177-357-1	PANEL (FRONT) ASSY (HX3)	
151	X-2177-359-1	PANEL (FRONT) ASSY (HX5)	
151	X-2177-360-1	PANEL (FRONT) ASSY (HX7)	
152	X-2177-364-1	BUTTON (BLUETOOTH) ASSY (HX5/HX7)	
153	2-895-141-01	BUTTON (EJECT)	
154	X-2177-363-1	BUTTON (POWER) ASSY	
156	A-1243-013-A	FRONT PANEL BOARD, COMPLETE (HX5: AEP, UK, AUS, KR)	
156	A-1243-276-A	FRONT PANEL BOARD, COMPLETE (HX3: AEP)	
156	A-1315-545-A	FRONT PANEL BOARD, COMPLETE (HX5: CND/HX7)	
156	A-1315-558-A	FRONT PANEL BOARD, COMPLETE (HX3: CND)	
156	A-1318-015-A	FRONT PANEL BOARD, COMPLETE (HX5: SP)	
157	3-087-053-01	+BVTP2.6 (3CR)	
158	1-831-756-21	CABLE, FLEXIBLE FLAT (5 CORE)	
159	1-831-797-21	CABLE, FLEXIBLE FLAT (17 CORE)	
FL901	1-519-939-11	INDICATOR TUBE, FLUORESCENT	

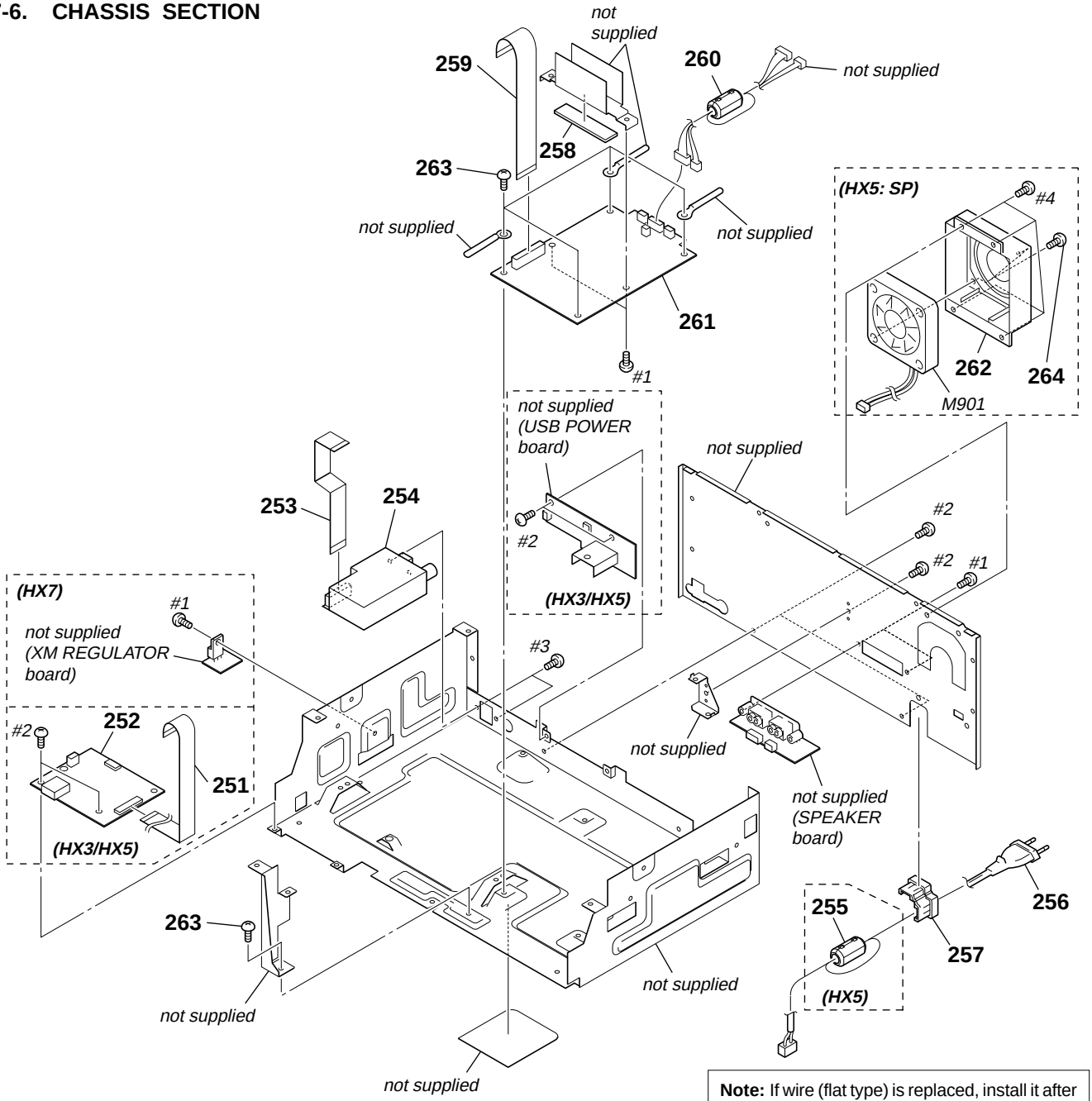
7-5. MAIN SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
201	A-1184-933-A	XM BOARD, COMPLETE (HX7)	
202	1-833-048-21	CABLE, FLEXIBLE FLAT (15 CORE) (HX7)	
203	3-196-590-02	INSULATED PLATE (POWER)	
204	A-1243-007-A	MAIN BOARD, COMPLETE (HX7)	
204	A-1243-275-A	MAIN BOARD, COMPLETE (HX3: AEP)	
204	A-1243-703-A	MAIN BOARD, COMPLETE (HX3: CND)	
204	A-1243-761-A	MAIN BOARD, COMPLETE (HX5: CND)	
204	A-1244-270-A	MAIN BOARD, COMPLETE (HX5: AEP, UK)	
204	A-1244-417-A	MAIN BOARD, COMPLETE (HX5: AUS, KR)	
204	A-1309-209-A	MAIN BOARD, COMPLETE (HX5: SP)	
205	A-1243-020-A	SWITCHING POWER BOARD, COMPLETE (HX3: CND/HX7)	
205	A-1243-203-A	SWITCHING POWER BOARD, COMPLETE (HX5: AEP, UK, AUS, KR)	
205	A-1243-278-A	SWITCHING POWER BOARD, COMPLETE (HX3: AEP)	
205	A-1243-762-A	SWITCHING POWER BOARD, COMPLETE (HX5: CND)	
205	A-1309-208-A	SWITCHING POWER BOARD, COMPLETE (HX5: SP)	
206	X-2177-362-1	LID (CD) ASSY	
207	3-077-331-01	+BV3 (3-CR)	
208	1-832-535-21	CABLE, FLEXIBLE FLAT (5 CORE)	
⚠F1	1-576-232-51	FUSE (H.B.C.) (5A/250V)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

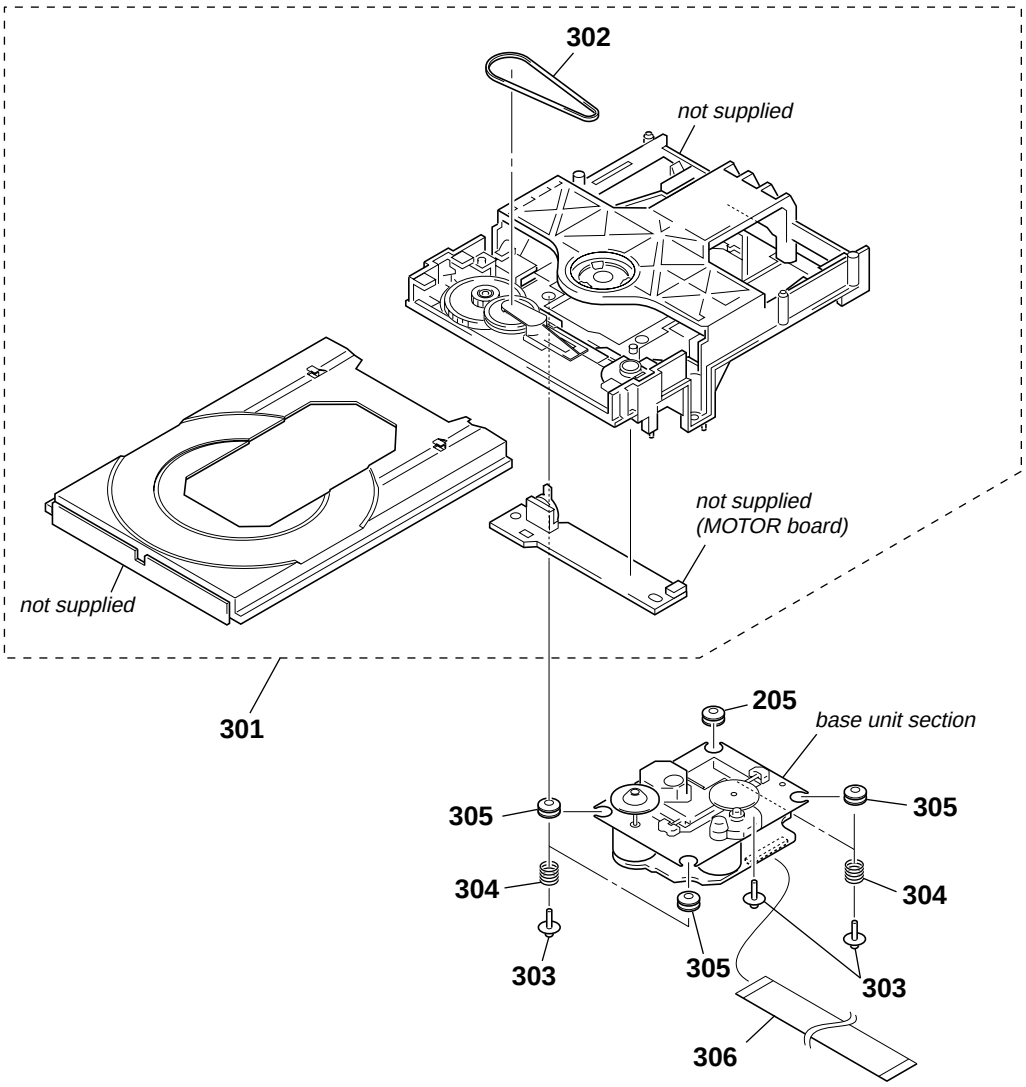
7-6. CHASSIS SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

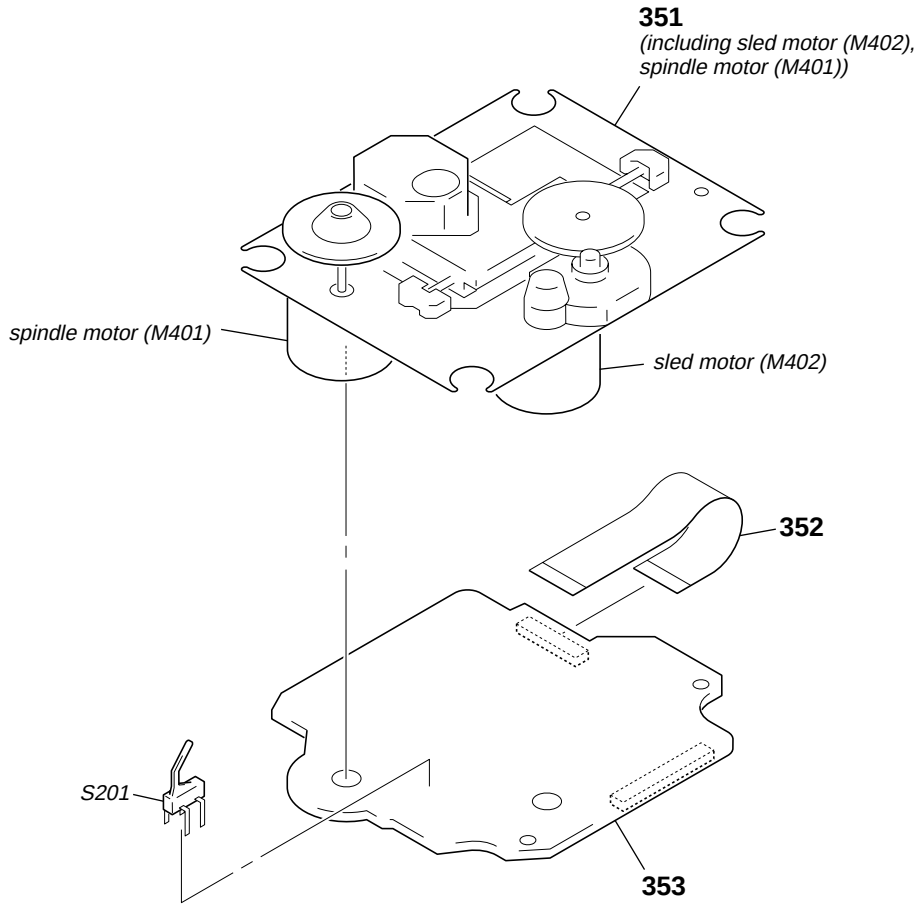
Ref. No.	Part No.	Description	Remark
251	1-832-608-21	CABLE, FLEXIBLE FLAT (19 CORE) (HX3/HX5)	
252	A-1244-345-A	USB BOARD, COMPLETE (HX3/HX5)	
253	1-832-815-21	CABLE, FLEXIBLE FLAT (9 CORE) (HX3: CND/HX5: CND, AUS, SP, KR/HX7)	
253	1-832-825-21	CABLE, FLEXIBLE FLAT (11 CORE) (HX3: AEP/HX5: AEP, UK)	
254	1-693-733-21	TUNER (FM/AM) (HX3: CND/HX5: CND/HX7)	
254	1-693-734-11	TUNER (FM/AM) (HX5: AUS)	
254	1-693-734-21	TUNER (FM/AM) (HX5: SP)	
254	1-693-735-11	TUNER (FM/AM) (HX5: KR)	
254	1-693-736-11	TUNER (FM/AM) (HX3: AEP/HX5: AEP, UK)	
255	1-457-368-11	CORE, FERRITE (HX5)	
⚠256	1-769-079-41	CORD, POWER (HX5: KR)	
⚠256	1-769-744-81	CORD, POWER (HX5: UK)	
⚠256	1-775-790-71	CORD, POWER (HX5: AUS)	
⚠256	1-830-188-11	CORD, POWER (HX3: AEP/HX5: AEP, SP)	
⚠256	1-830-190-11	CORD, POWER (HX3: CND/HX5: CND/HX7)	
257	3-703-244-00	BUSHING (2104), CORD	
258	2-514-691-01	SHEET, RADIATION	
259	1-832-865-21	CABLE, FLEXIBLE FLAT (19 CORE)	
260	1-400-932-11	FILTER, CLAMP	
261	A-1166-890-A	AMP BOARD, COMPLETE (HX5)	
261	A-1237-038-A	AMP BOARD, COMPLETE (HX3/HX7)	
262	3-215-001-01	COVER (FAN) (HX5: SP)	
263	3-077-331-21	+BV3 (3-CR)	
264	3-254-143-11	SCREW (B3), (+) BV TAPPING (HX5: SP)	
M901	1-787-652-11	FAN, D. C. (50 SQUARE) (HX5: SP)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-863-09	SCREW +BVTT 2.6X8 (S)	
#4	7-685-871-01	SCREW +BVTT 3X6 (S) (HX5: SP)	

7-7. LOADING MECHANISM SECTION



Ref. No.	Part No.	Description	Remark
301	A-1242-967-A	LOADING (BK) ASSY	
302	3-080-478-01	BELT	
303	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
304	4-227-045-41	SPRING (INSULATOR)	
305	4-229-005-41	INSULATOR	
306	1-832-615-21	CABLE, FLEXIBLE FLAT (21 CORE) (HX7)	
306	1-832-635-21	CABLE, FLEXIBLE FLAT (25 CORE) (HX3/HX5)	

7-8. BASE UNIT SECTION (BU-K6BD90-WOD: HX7) (BU-K6BD90U-WOD: HX3/HX5)



Ref. No.	Part No.	Description	Remark
⚠351	A-4735-357-A	BASE ASSY, OP (KSM-213D)	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
353	A-1217-914-A	CD BOARD, COMPLETE (HX7)	
353	A-1229-580-A	CD BOARD, COMPLETE (HX3/HX5)	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  KR : Korean model
  SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-1166-890-A	AMP BOARD, COMPLETE (HX5)			
	A-1237-038-A	AMP BOARD, COMPLETE (HX3/HX7)			
		**********			
		< CAPACITOR >			
C701	1-126-961-11	ELECT	2.2uF	20%	50V
C702	1-136-497-81	FILM	0.1uF	5%	50V
C703	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V (HX5)
C704	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-100-717-91	CERAMIC CHIP	1uF		16V (HX5)
C706	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX3/HX7)
C707	1-112-245-21	ELECT	47uF	20%	35V (HX3/HX7)
C708	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX5)
C708	1-112-245-21	ELECT	47uF	20%	35V (HX3/HX7)
C709	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX5)
C709	1-112-245-21	ELECT	47uF	20%	35V (HX3/HX7)
C710	1-112-245-21	ELECT	47uF	20%	35V (HX3/HX7)
C710	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (HX5)
C711	1-126-934-11	ELECT	220uF	20%	16V
C712	1-100-717-91	CERAMIC CHIP	1uF		16V (HX5)
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX3/HX7)
C713	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C714	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C714	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (HX3/HX7)
C715	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C715	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (HX3/HX7)
C716	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C716	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (HX3/HX7)
C717	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C717	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (HX3/HX7)
C718	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C719	1-100-924-21	ELECT	2200uF	20%	35V (HX5)
C719	1-137-806-21	ELECT	1800uF	20%	35V (HX3/HX7)
C720	1-131-704-11	FILM	1uF	5%	50V (HX5)
C720	1-137-198-11	FILM	1uF	5%	50V (HX3/HX7)
C722	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C723	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C724	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C725	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C726	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C728	1-131-704-11	FILM	1uF	5%	50V (HX5)
C728	1-137-198-11	FILM	1uF	5%	50V (HX3/HX7)
C730	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C731	1-104-658-91	ELECT	100uF	20%	10V
C732	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C733	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C734	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C735	1-126-964-11	ELECT	10uF	20%	50V
C736	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C737	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C738	1-126-964-11	ELECT	10uF	20%	50V
C739	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C740	1-126-923-91	ELECT	220uF	20%	10V
C741	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C742	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C743	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C744	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C745	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C746	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C747	1-104-658-91	ELECT	100uF	20%	10V
C748	1-126-964-11	ELECT	10uF	20%	50V
C749	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C751	1-126-961-11	ELECT	2.2uF	20%	50V
C752	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C753	1-104-658-91	ELECT	100uF	20%	10V

AMP

Ref. No.	Part No.	Description			Remark
C754	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C756	1-100-717-91	CERAMIC CHIP	1uF		16V (HX5)
C756	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX3/HX7)
C757	1-126-964-11	ELECT	10uF	20%	50V (HX3/HX7)
C757	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (HX5)
C758	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C759	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX5)
C760	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX3/HX7)
C761	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C762	1-100-717-91	CERAMIC CHIP	1uF		16V (HX5)
C762	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX3/HX7)
C763	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C764	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V (HX3/HX7)
C764	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C765	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V (HX3/HX7)
C765	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C766	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V (HX3/HX7)
C766	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C767	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V (HX3/HX7)
C767	1-125-898-11	CERAMIC CHIP	0.22uF	10%	50V (HX5)
C768	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C769	1-100-924-21	ELECT	2200uF	20%	35V (HX5)
C769	1-137-806-21	ELECT	1800uF	20%	35V (HX3/HX7)
C770	1-131-704-11	FILM	1uF	5%	50V (HX5)
C770	1-137-198-11	FILM	1uF	5%	50V (HX3/HX7)
C772	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C773	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C774	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C775	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C777	1-131-704-11	FILM	1uF	5%	50V (HX5)
C777	1-137-198-11	FILM	1uF	5%	50V (HX3/HX7)
C778	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C779	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C780	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C781	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX5)
C781	1-126-964-11	ELECT	10uF	20%	50V (HX3/HX7)
C782	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (HX5)
C783	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C784	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C785	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C786	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C787	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C788	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C790	1-126-933-11	ELECT	100uF	20%	16V (HX3/HX7)
C791	1-136-497-81	FILM	0.1uF	5%	50V
C793	1-126-964-11	ELECT	10uF	20%	50V (HX5)
C794	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C795	1-126-964-11	ELECT	10uF	20%	50V (HX5)
C796	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C797	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C798	1-126-964-11	ELECT	10uF	20%	50V
C799	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C804	1-163-205-00	CERAMIC CHIP	0.001uF	10%	50V
C806	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C831	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C832	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C844	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C845	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C846	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C847	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
		< CONNECTOR >			
CN700	1-784-780-11	CONNECTOR, FFC 19P			
		< DIODE >			
D701	6-501-193-01	DIODE 1SS355WTE-17			
D702	6-501-193-01	DIODE 1SS355WTE-17 (HX3/HX7)			
D705	6-500-260-01	DIODE P6SMB39AT3 (HX5)			
D706	6-500-260-01	DIODE P6SMB39AT3 (HX5)			
D713	6-501-159-01	DIODE UDZW-TE17-2.4B (HX5)			
D751	6-501-193-01	DIODE 1SS355WTE-17 (HX5)			
D755	6-500-260-01	DIODE P6SMB39AT3 (HX5)			
D756	6-500-260-01	DIODE P6SMB39AT3 (HX5)			
		< EARTH TERMINAL >			
EP701	1-537-771-21	TERMINAL BOARD, GROUND			
EP702	1-537-771-21	TERMINAL BOARD, GROUND			
EP703	1-537-771-21	TERMINAL BOARD, GROUND			
		< IC >			
IC701	6-707-608-01	IC PCM1803DBR			
IC702	6-708-637-01	IC NJM2871BF33-TE2			
IC703	6-701-261-01	IC MC74VHC74DTR2			
IC704	6-707-956-01	IC NJM2871BF18-TE2			
IC705	6-705-979-01	IC CXD9788AR			
IC707	6-704-802-01	IC CXD9774M (HX5)			
IC707	6-710-134-01	IC CXD9845AM (HX3/HX7)			
IC708	6-704-802-01	IC CXD9774M (HX5)			
IC709	6-701-189-01	IC MC74VHC1GU04DFT1			

AMP

Ref. No.	Part No.	Description			Remark
		< COIL >			
L701	1-469-967-21	INDUCTOR	10uH		
L702	1-469-967-21	INDUCTOR	10uH		
L703	1-469-967-21	INDUCTOR	10uH		
L704	1-469-967-21	INDUCTOR	10uH		
L705	1-412-939-11	INDUCTOR	1uH		
L708	1-456-813-11	COIL, AIR-CORE (HX5)			
L709	1-456-813-11	COIL, AIR-CORE (HX5)			
L710	1-456-680-11	CHOKE, COIL	10uH		
L711	1-456-680-11	CHOKE, COIL	10uH		
L758	1-456-813-11	COIL, AIR-CORE (HX5)			
L759	1-456-813-11	COIL, AIR-CORE (HX5)			
L760	1-456-680-11	CHOKE, COIL	10uH		
L761	1-456-680-11	CHOKE, COIL	10uH		
		< TRANSISTOR >			
Q701	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q702	8-729-600-22	TRANSISTOR	2SA1235-F		
Q703	8-729-600-22	TRANSISTOR	2SA1235-F		
Q752	8-729-600-22	TRANSISTOR	2SA1235-F		
Q753	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
R701	1-216-809-11	METAL CHIP	100	5%	1/10W
R704	1-216-817-11	METAL CHIP	470	5%	1/10W (HX5)
R706	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-798-11	METAL CHIP	12	5%	1/10W (HX3/HX7)
R708	1-216-798-11	METAL CHIP	12	5%	1/10W (HX3/HX7)
R708	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R709	1-216-798-11	METAL CHIP	12	5%	1/10W (HX3/HX7)
R709	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R710	1-216-798-11	METAL CHIP	12	5%	1/10W (HX3/HX7)
R711	1-216-809-11	METAL CHIP	100	5%	1/10W
R712	1-216-809-11	METAL CHIP	100	5%	1/10W
R713	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX7)
R713	1-216-837-11	METAL CHIP	22K	5%	1/10W (HX5)
R714	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX7)
R714	1-216-816-11	METAL CHIP	390	5%	1/10W (HX5)
R715	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R717	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R718	1-216-833-11	METAL CHIP	10K	5%	1/10W
R719	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R720	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R721	1-216-833-11	METAL CHIP	10K	5%	1/10W
R722	1-216-841-11	METAL CHIP	47K	5%	1/10W
R723	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R724	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R725	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R726	1-216-849-11	METAL CHIP	220K	5%	1/10W
R727	1-216-845-11	METAL CHIP	100K	5%	1/10W
R728	1-216-849-11	METAL CHIP	220K	5%	1/10W
R729	1-216-821-11	METAL CHIP	1K	5%	1/10W
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R731	1-216-817-11	METAL CHIP	470	5%	1/10W
R733	1-216-817-11	METAL CHIP	470	5%	1/10W
R734	1-216-797-11	METAL CHIP	10	5%	1/10W (HX5)
R735	1-216-797-11	METAL CHIP	10	5%	1/10W (HX5)
R736	1-216-797-11	METAL CHIP	10	5%	1/10W (HX5)
R737	1-216-797-11	METAL CHIP	10	5%	1/10W (HX5)
R738	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R739	1-216-833-11	METAL CHIP	10K	5%	1/10W
R740	1-216-833-11	METAL CHIP	10K	5%	1/10W
R741	1-216-809-11	METAL CHIP	100	5%	1/10W
R742	1-216-833-11	METAL CHIP	10K	5%	1/10W
R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R744	1-216-864-11	SHORT CHIP	0		
R745	1-216-809-11	METAL CHIP	100	5%	1/10W
R746	1-216-809-11	METAL CHIP	100	5%	1/10W
R747	1-216-817-11	METAL CHIP	470	5%	1/10W
R748	1-216-841-11	METAL CHIP	47K	5%	1/10W
R749	1-216-864-11	SHORT CHIP	0		
R750	1-216-841-11	METAL CHIP	47K	5%	1/10W
R751	1-216-809-11	METAL CHIP	100	5%	1/10W
R752	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX7)
R752	1-216-837-11	METAL CHIP	22K	5%	1/10W (HX5)
R754	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX7)
R754	1-216-816-11	METAL CHIP	390	5%	1/10W (HX5)
R755	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX7)
R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R757	1-220-942-11	METAL CHIP	3.3	1%	1/4W (HX3/HX7)
R758	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R759	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R759	1-216-835-11	METAL CHIP	15K	5%	1/10W (HX3/HX7)
R761	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R762	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5)
R764	1-216-817-11	METAL CHIP	470	5%	1/10W (HX5)
R765	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R768	1-216-833-11	METAL CHIP	10K	5%	1/10W
R769	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R770	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R771	1-216-833-11	METAL CHIP	10K	5%	1/10W
R772	1-216-833-11	METAL CHIP	10K	5%	1/10W
R773	1-216-833-11	METAL CHIP	10K	5%	1/10W
R774	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R775	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R776	1-216-849-11	METAL CHIP	220K	5%	1/10W
R777	1-216-845-11	METAL CHIP	100K	5%	1/10W
R778	1-216-849-11	METAL CHIP	220K	5%	1/10W
R780	1-216-801-11	METAL CHIP	22	5%	1/10W
R781	1-216-809-11	METAL CHIP	100	5%	1/10W
R782	1-216-857-11	METAL CHIP	1M	5%	1/10W
R783	1-216-801-11	METAL CHIP	22	5%	1/10W
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-809-11	METAL CHIP	100	5%	1/10W
R786	1-216-809-11	METAL CHIP	100	5%	1/10W
R787	1-216-809-11	METAL CHIP	100	5%	1/10W
R788	1-216-809-11	METAL CHIP	100	5%	1/10W
R789	1-216-809-11	METAL CHIP	100	5%	1/10W
R790	1-216-809-11	METAL CHIP	100	5%	1/10W
R792	1-216-864-11	SHORT CHIP	0		
R793	1-216-841-11	METAL CHIP	47K	5%	1/10W
R794	1-216-864-11	SHORT CHIP	0 (HX5)		
R795	1-216-864-11	SHORT CHIP	0 (HX5)		
R800	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
R801	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5)
		< VIBRATOR >			
X702	1-795-660-21	QUARTZ CRYSTAL UNIT (49.152MHz)			
**********					
		ANT BOARD (HX5/HX7)			
		**********			
		< CAPACITOR >			
C914	1-162-907-11	CERAMIC CHIP	2PF	0.25PF	50V
		< CONNECTOR >			
CN904	1-818-381-11	CONNECTOR, COAXIAL			
**********					
	A-1236-563-A	BT BOARD, COMPLETE (HX5/HX7)			
		**********			
		< CAPACITOR >			
C901	1-126-395-11	ELECT CHIP	22uF	20%	16V
C902	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C903	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C904	1-126-398-11	ELECT CHIP	4.7uF	20%	35V
C905	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-126-204-11	ELECT CHIP	47uF	20%	16V
C908	1-126-204-11	ELECT CHIP	47uF	20%	16V
C912	1-126-204-11	ELECT CHIP	47uF	20%	16V
C921	1-126-193-11	ELECT CHIP	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C922	1-126-193-11	ELECT CHIP	1uF	20%	50V
C923	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C924	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C925	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C926	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C927	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C928	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C929	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C930	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C931	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C932	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C941	1-126-189-11	ELECT CHIP	0.22uF	20%	50V
C942	1-126-189-11	ELECT CHIP	0.22uF	20%	50V
C945	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C946	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C951	1-126-193-11	ELECT CHIP	1uF	20%	50V
C952	1-126-193-11	ELECT CHIP	1uF	20%	50V
C953	1-126-193-11	ELECT CHIP	1uF	20%	50V
C954	1-126-193-11	ELECT CHIP	1uF	20%	50V
C957	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C958	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C965	1-126-189-11	ELECT CHIP	0.22uF	20%	50V
C966	1-126-189-11	ELECT CHIP	0.22uF	20%	50V
C969	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C971	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CN901	1-784-374-51	CONNECTOR, FFC/FPC 15P			
CN902	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
CN903	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
		< DIODE >			
D901	6-500-335-01	DIODE MC2838-T112-1			
D902	6-500-335-01	DIODE MC2838-T112-1			
		< JUMPER RESISTOR/FERRITE BEAD >			
FB901	1-216-864-11	SHORT CHIP	0		
FB902	1-216-864-11	SHORT CHIP	0		
FB903	1-216-864-11	SHORT CHIP	0		
FB904	1-216-864-11	SHORT CHIP	0		
FB905	1-216-864-11	SHORT CHIP	0		
FB906	1-216-864-11	SHORT CHIP	0		
FB907	1-400-684-21	INDUCTOR, FERRITE BEAD			
FB908	1-216-864-11	SHORT CHIP	0		
FB909	1-216-864-11	SHORT CHIP	0		
FB910	1-216-864-11	SHORT CHIP	0		
FB911	1-216-864-11	SHORT CHIP	0		
FB913	1-414-594-11	INDUCTOR, FERRITE BEAD			
FB914	1-414-594-11	INDUCTOR, FERRITE BEAD			
		< IC/BLUETOOTH MODULE >			
IC901	6-702-945-01	IC NJM14558V-TE2			
IC902	6-702-945-01	IC NJM14558V-TE2			
IC903	6-710-962-01	IC XC6213B332MR			
IC904	8-753-282-72	CXN1404-5ACL (BLUETOOTH MODULE)			

BT **CD**

Ref. No.	Part No.	Description			Remark
		< JUMPER RESISTOR >			
JR902	1-216-864-11	SHORT CHIP	0		
		< RESISTOR >			
R900	1-216-809-11	METAL CHIP	100	5%	1/10W
R901	1-216-809-11	METAL CHIP	100	5%	1/10W
R902	1-216-809-11	METAL CHIP	100	5%	1/10W
R903	1-216-809-11	METAL CHIP	100	5%	1/10W
R904	1-216-809-11	METAL CHIP	100	5%	1/10W
R905	1-216-809-11	METAL CHIP	100	5%	1/10W
R906	1-216-809-11	METAL CHIP	100	5%	1/10W
R907	1-216-817-11	METAL CHIP	470	5%	1/10W
R908	1-216-817-11	METAL CHIP	470	5%	1/10W
R909	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R910	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R911	1-216-864-11	SHORT CHIP	0		
R913	1-216-841-11	METAL CHIP	47K	5%	1/10W
R914	1-216-864-11	SHORT CHIP	0		
R915	1-216-841-11	METAL CHIP	47K	5%	1/10W
R916	1-216-841-11	METAL CHIP	47K	5%	1/10W
R917	1-216-841-11	METAL CHIP	47K	5%	1/10W
R918	1-216-841-11	METAL CHIP	47K	5%	1/10W
R921	1-216-809-11	METAL CHIP	100	5%	1/10W
R922	1-216-809-11	METAL CHIP	100	5%	1/10W
R923	1-216-813-11	METAL CHIP	220	5%	1/10W
R924	1-216-813-11	METAL CHIP	220	5%	1/10W
R925	1-216-813-11	METAL CHIP	220	5%	1/10W
R926	1-216-813-11	METAL CHIP	220	5%	1/10W
R927	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R928	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R929	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R930	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R931	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R932	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R933	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R934	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R935	1-216-809-11	METAL CHIP	100	5%	1/10W
R936	1-216-809-11	METAL CHIP	100	5%	1/10W
R937	1-216-809-11	METAL CHIP	100	5%	1/10W
R938	1-216-809-11	METAL CHIP	100	5%	1/10W
R939	1-216-809-11	METAL CHIP	100	5%	1/10W
R940	1-216-809-11	METAL CHIP	100	5%	1/10W
R941	1-216-809-11	METAL CHIP	100	5%	1/10W
R942	1-216-809-11	METAL CHIP	100	5%	1/10W
R943	1-216-845-11	METAL CHIP	100K	5%	1/10W
R944	1-216-845-11	METAL CHIP	100K	5%	1/10W
R945	1-216-845-11	METAL CHIP	100K	5%	1/10W
R946	1-216-845-11	METAL CHIP	100K	5%	1/10W
R947	1-216-841-11	METAL CHIP	47K	5%	1/10W
R948	1-216-841-11	METAL CHIP	47K	5%	1/10W
R949	1-216-821-11	METAL CHIP	1K	5%	1/10W
R950	1-216-821-11	METAL CHIP	1K	5%	1/10W
R951	1-216-821-11	METAL CHIP	1K	5%	1/10W
R952	1-216-821-11	METAL CHIP	1K	5%	1/10W
R953	1-216-841-11	METAL CHIP	47K	5%	1/10W
R954	1-216-841-11	METAL CHIP	47K	5%	1/10W
R955	1-216-845-11	METAL CHIP	100K	5%	1/10W
R956	1-216-845-11	METAL CHIP	100K	5%	1/10W
R957	1-216-857-11	METAL CHIP	1M	5%	1/10W
R958	1-216-857-11	METAL CHIP	1M	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R960	1-216-809-11	METAL CHIP	100	5%	1/10W
R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R962	1-216-809-11	METAL CHIP	100	5%	1/10W
R963	1-216-845-11	METAL CHIP	100K	5%	1/10W
R964	1-216-845-11	METAL CHIP	100K	5%	1/10W
R965	1-216-809-11	METAL CHIP	100	5%	1/10W
R966	1-216-809-11	METAL CHIP	100	5%	1/10W
R967	1-216-845-11	METAL CHIP	100K	5%	1/10W
R968	1-216-845-11	METAL CHIP	100K	5%	1/10W
R969	1-216-817-11	METAL CHIP	470	5%	1/10W
R970	1-216-817-11	METAL CHIP	470	5%	1/10W
R971	1-216-817-11	METAL CHIP	470	5%	1/10W
R972	1-216-817-11	METAL CHIP	470	5%	1/10W
R973	1-216-817-11	METAL CHIP	470	5%	1/10W
R974	1-216-817-11	METAL CHIP	470	5%	1/10W
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	A-1217-914-A	CD BOARD, COMPLETE (HX7)			
	A-1229-580-A	CD BOARD, COMPLETE (HX3/HX5)			
		**********			
		< CAPACITOR >			
C100	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C105	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C106	1-128-995-21	ELECT CHIP	100uF	20%	10V
C107	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C112	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C113	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C115	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C116	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C117	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C119	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C123	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C124	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C125	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C127	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C128	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C130	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C132	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C136	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C137	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C138	1-164-315-11	CERAMIC CHIP	470PF	5%	50V

Ref. No.	Part No.	Description			Remark
C139	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C140	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C141	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C142	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C143	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C144	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C145	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C146	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C147	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C148	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C149	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C150	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C151	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C152	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-128-995-21	ELECT CHIP	100uF	20%	10V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C207	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C303	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C306	1-128-995-21	ELECT CHIP	100uF	20%	10V
C307	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C403	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN201	1-784-833-51	CONNECTOR, FFC (LIF (NON-ZIF)) 21P (HX7)			
CN203	1-784-875-51	CONNECTOR, FFC (LIF (NON-ZIF)) 25P			(HX3/HX5)
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	6-709-624-01	IC TC94A70FG-006 (HX7)			
IC101	6-710-472-01	IC TC94A70FG-007 (S, D) (HX3/HX5)			
IC201	6-710-808-01	IC TK63115SCL-G@GT (HX7)			
IC201	6-710-936-01	IC XC6215B152MR (HX3/HX5)			
IC401	6-710-637-01	IC BA5826SFP-E2			
		< TRANSISTOR >			
Q301	6-551-120-01	TRANSISTOR	2SA2119K		
		< RESISTOR >			
R101	1-216-813-11	METAL CHIP	220	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R104	1-216-295-00	SHORT CHIP	0		
R105	1-216-857-11	METAL CHIP	1M	5%	1/10W
R106	1-216-821-11	METAL CHIP	1K	5%	1/10W
R108	1-216-864-11	SHORT CHIP	0		
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R113	1-216-833-11	METAL CHIP	10K	5%	1/10W
R114	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-845-11	METAL CHIP	100K	5%	1/10W
R120	1-216-864-11	SHORT CHIP	0 (HX7)		
R122	1-216-864-11	SHORT CHIP	0 (HX3/HX5)		
R123	1-216-864-11	SHORT CHIP	0 (HX3/HX5)		
R124	1-216-864-11	SHORT CHIP	0 (HX3/HX5)		
R125	1-216-864-11	SHORT CHIP	0 (HX7)		
R126	1-216-864-11	SHORT CHIP	0 (HX7)		
R127	1-216-864-11	SHORT CHIP	0 (HX7)		
R128	1-216-853-11	METAL CHIP	470K	5%	1/10W
R129	1-216-821-11	METAL CHIP	1K	5%	1/10W
R130	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-857-11	METAL CHIP	1M	5%	1/10W
R135	1-216-853-11	METAL CHIP	470K	5%	1/10W
R136	1-216-837-11	METAL CHIP	22K	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W
R140	1-216-864-11	SHORT CHIP	0		
R142	1-216-837-11	METAL CHIP	22K	5%	1/10W
R143	1-216-841-11	METAL CHIP	47K	5%	1/10W
R144	1-216-837-11	METAL CHIP	22K	5%	1/10W
R145	1-216-864-11	SHORT CHIP	0		
R146	1-216-864-11	SHORT CHIP	0		
R147	1-216-864-11	SHORT CHIP	0		
R148	1-216-864-11	SHORT CHIP	0		
R149	1-216-864-11	SHORT CHIP	0		
R150	1-216-864-11	SHORT CHIP	0		
R151	1-216-864-11	SHORT CHIP	0		
R153	1-216-857-11	METAL CHIP	1M	5%	1/10W
R154	1-216-857-11	METAL CHIP	1M	5%	1/10W
R155	1-216-805-11	METAL CHIP	47	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-00	SHORT CHIP	0		
R202	1-216-295-00	SHORT CHIP	0		
R203	1-216-809-11	METAL CHIP	100	5%	1/10W
R204	1-216-809-11	METAL CHIP	100	5%	1/10W
R205	1-216-809-11	METAL CHIP	100	5%	1/10W
R206	1-216-809-11	METAL CHIP	100	5%	1/10W
R207	1-216-809-11	METAL CHIP	100	5%	1/10W
R208	1-216-809-11	METAL CHIP	100	5%	1/10W
R209	1-216-809-11	METAL CHIP	100	5%	1/10W
R210	1-216-809-11	METAL CHIP	100	5%	1/10W
R211	1-216-809-11	METAL CHIP	100	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R213	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R214	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R215	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R216	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R218	1-216-845-11	METAL CHIP	100K	5%	1/10W
R219	1-216-845-11	METAL CHIP	100K	5%	1/10W
R220	1-216-845-11	METAL CHIP	100K	5%	1/10W
R221	1-216-845-11	METAL CHIP	100K	5%	1/10W
R222	1-216-845-11	METAL CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R223	1-216-845-11	METAL CHIP	100K	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-864-11	SHORT CHIP	0		
R303	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R304	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R405	1-216-833-11	METAL CHIP	10K	5%	1/10W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R414	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R415	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< VIBRATOR >			
X102	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)			
**********					
	A-1243-013-A	FRONT PANEL BOARD, COMPLETE (HX5: AEP, UK, AUS, KR)			
	A-1243-276-A	FRONT PANEL BOARD, COMPLETE (HX3: AEP)			
	A-1315-545-A	FRONT PANEL BOARD, COMPLETE (HX5: CND/HX7)			
	A-1315-558-A	FRONT PANEL BOARD, COMPLETE (HX3: CND)			
	A-1318-015-A	FRONT PANEL BOARD, COMPLETE (HX5: SP)			
		**********			
		< CAPACITOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-165-621-11	CERAMIC CHIP	0.1uF		50V
C903	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C904	1-126-791-11	ELECT	10uF	20%	35V
C905	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C908	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C909	1-126-791-11	ELECT	10uF	20%	35V
C910	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C911	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C912	1-126-791-11	ELECT	10uF	20%	35V
C913	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C915	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C916	1-126-791-11	ELECT	10uF	20%	35V
C917	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C919	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C920	1-126-791-11	ELECT	10uF	20%	35V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C922	1-126-964-11	ELECT	10uF	20%	50V
C923	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C924	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C925	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C954	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C962	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D903	6-501-193-01	DIODE 1SS355WTE-17			
D905	6-501-579-01	DIODE MC2837			
D906	6-501-579-01	DIODE MC2837			
D907	6-501-579-01	DIODE MC2837			
D909	6-501-582-01	DIODE 1N4002-B5			
D951	6-501-483-01	LED SLR-325VCT31P (STANDBY)			

Ref. No.	Part No.	Description			Remark
D952	6-501-539-01	LED SELK5E20C-DTP15 (BLUETOOTH)			(HX5/HX7)
D952	8-719-061-96	LED SLR-325DCT31 (USB MEMORY)			(HX3)
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-519-939-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-759-100-96	IC uPC4558G2			
IC951	6-600-349-31	IC NJL24H400A			
		< JUMPER RESISTOR >			
JR901	1-216-864-11	SHORT CHIP	0		
JR902	1-216-864-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q901	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q902	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q903	8-729-038-28	TRANSISTOR	RT1N441C-TP-1		
Q904	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q905	8-729-038-28	TRANSISTOR	RT1N441C-TP-1		
Q906	8-729-047-62	TRANSISTOR	2SC3440-T12-1F		
Q907	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF		
Q908	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q951	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q952	8-729-600-22	TRANSISTOR	2SA1235-F		
Q953	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R901	1-216-841-11	METAL CHIP	47K	5%	1/10W
R902	1-216-845-11	METAL CHIP	100K	5%	1/10W
R903	1-216-841-11	METAL CHIP	47K	5%	1/10W
R904	1-216-845-11	METAL CHIP	100K	5%	1/10W
R905	1-216-841-11	METAL CHIP	47K	5%	1/10W
R906	1-216-821-11	METAL CHIP	1K	5%	1/10W
R907	1-216-821-11	METAL CHIP	1K	5%	1/10W
R908	1-216-797-11	METAL CHIP	10	5%	1/10W
R909	1-216-797-11	METAL CHIP	10	5%	1/10W
R910	1-216-833-11	METAL CHIP	10K	5%	1/10W
R911	1-216-833-11	METAL CHIP	10K	5%	1/10W
R917	1-216-837-11	METAL CHIP	22K	5%	1/10W
R918	1-216-813-11	METAL CHIP	220	5%	1/10W
R919	1-216-837-11	METAL CHIP	22K	5%	1/10W
R920	1-216-821-11	METAL CHIP	1K	5%	1/10W
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R923	1-216-821-11	METAL CHIP	1K	5%	1/10W
R924	1-216-841-11	METAL CHIP	47K	5%	1/10W
R926	1-216-841-11	METAL CHIP	47K	5%	1/10W
R927	1-216-821-11	METAL CHIP	1K	5%	1/10W
R928	1-216-833-11	METAL CHIP	10K	5%	1/10W
R929	1-216-833-11	METAL CHIP	10K	5%	1/10W
R930	1-216-833-11	METAL CHIP	10K	5%	1/10W
R933	1-216-837-11	METAL CHIP	22K	5%	1/10W
R934	1-216-837-11	METAL CHIP	22K	5%	1/10W
R935	1-216-821-11	METAL CHIP	1K	5%	1/10W
R936	1-216-833-11	METAL CHIP	10K	5%	1/10W
R937	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R940	1-216-805-11	METAL CHIP	47	5%	1/10W
R943	1-216-805-11	METAL CHIP	47	5%	1/10W
R944	1-216-833-11	METAL CHIP	10K	5%	1/10W
R945	1-216-833-11	METAL CHIP	10K	5%	1/10W
R947	1-216-817-11	METAL CHIP	470	5%	1/10W
R949	1-216-833-11	METAL CHIP	10K	5%	1/10W
R950	1-216-813-11	METAL CHIP	220	5%	1/10W (HX5/HX7)
R950	1-216-817-11	METAL CHIP	470	5%	1/10W (HX3)
R951	1-216-821-11	METAL CHIP	1K	5%	1/10W
R953	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R954	1-216-809-11	METAL CHIP	100	5%	1/10W
R955	1-216-833-11	METAL CHIP	10K	5%	1/10W
R956	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R957	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R958	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R959	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R962	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R970	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R979	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R980	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R981	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R982	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R983	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R984	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R989	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R990	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R991	1-216-821-11	METAL CHIP	1K	5%	1/10W
R992	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< ROTARY ENCODER >			
RV952	1-478-200-11	ENCODER, ROTARY (VOLUME)			
		< SWITCH >			
S951	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
S952	1-762-875-21	SWITCH, KEYBOARD (BLUETOOTH OPR)			(HX5/HX7)
S954	1-762-875-21	SWITCH, KEYBOARD (⏏)			
**********					
		HEADPHONE BOARD			
		**********			
		< CAPACITOR >			
C982	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C984	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C987	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C989	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C990	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C991	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C997	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C999	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
		< JUMPER RESISTOR >			
FB982	1-216-864-11	SHORT CHIP	0		
FB983	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
		< JACK >			
J981	1-815-629-21	JACK (AUDIO IN)			
J982	1-815-629-21	JACK (PHONES)			
		< RESISTOR >			
R931	1-216-821-11	METAL CHIP	1K	5%	1/10W
R932	1-216-845-11	METAL CHIP	100K	5%	1/10W
R941	1-216-821-11	METAL CHIP	1K	5%	1/10W
R942	1-216-845-11	METAL CHIP	100K	5%	1/10W
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	A-1243-007-A	MAIN BOARD, COMPLETE (HX7)			
	A-1243-275-A	MAIN BOARD, COMPLETE (HX3: AEP)			
	A-1243-703-A	MAIN BOARD, COMPLETE (HX3: CND)			
	A-1243-761-A	MAIN BOARD, COMPLETE (HX5: CND)			
	A-1244-270-A	MAIN BOARD, COMPLETE (HX5: AEP, UK)			
	A-1244-417-A	MAIN BOARD, COMPLETE (HX5: AUS, KR)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C106	1-126-963-11	ELECT	4.7uF	20%	50V
C107	1-126-960-11	ELECT	1uF	20%	50V
C111	1-126-923-91	ELECT	220uF	20%	10V
C112	1-126-923-91	ELECT	220uF	20%	10V
C113	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C114	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C147	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C148	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C149	1-126-960-11	ELECT	1uF	20%	50V
C150	1-126-960-11	ELECT	1uF	20%	50V
C151	1-126-960-11	ELECT	1uF	20%	50V
C152	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C206	1-126-963-11	ELECT	4.7uF	20%	50V
C207	1-126-960-11	ELECT	1uF	20%	50V
C212	1-126-923-91	ELECT	220uF	20%	10V
C213	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C214	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C240	1-115-156-11	CERAMIC CHIP	1uF		10V (HX7)
C247	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C248	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C249	1-126-960-11	ELECT	1uF	20%	50V
C250	1-126-960-11	ELECT	1uF	20%	50V
C251	1-126-960-11	ELECT	1uF	20%	50V
C252	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C253	1-126-961-11	ELECT	2.2uF	20%	50V
C254	1-126-961-11	ELECT	2.2uF	20%	50V
C256	1-130-494-11	MYLAR	0.082uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C258	1-130-494-11	MYLAR	0.082uF	5%	50V
C260	1-130-494-11	MYLAR	0.082uF	5%	50V
C263	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C264	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C265	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C266	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C268	1-130-494-11	MYLAR	0.082uF	5%	50V
C269	1-126-964-11	ELECT	10uF	20%	50V
C301	1-126-768-11	ELECT	2200uF	20%	16V
C302	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C305	1-124-261-00	ELECT	10uF	20%	50V
C306	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-126-925-91	ELECT	470uF	20%	10V
C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C317	1-126-916-11	ELECT	1000uF	20%	6.3V
C318	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C319	1-126-923-91	ELECT	220uF	20%	10V
C321	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C323	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C337	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C348	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C353	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C355	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C362	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C363	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C364	1-126-923-91	ELECT	220uF	20%	10V
C365	1-164-156-11	CERAMIC CHIP	0.1uF		25V (HX7)
C366	1-126-947-11	ELECT	47uF	20%	35V
C368	1-126-933-11	ELECT	100uF	20%	16V (HX7)
C370	1-164-156-11	CERAMIC CHIP	0.1uF		25V (HX3/HX5)
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V (HX3/HX5)
C372	1-164-156-11	CERAMIC CHIP	0.1uF		25V (HX3/HX5)
C401	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN301	1-815-450-11	PIN, CONNECTOR (PWB) 9P			
CN302	1-784-778-11	CONNECTOR, FFC 17P			
CN304	1-819-130-11	PIN, CONNECTOR 2P			
CN305	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
CN306	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
CN307	1-779-287-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P (HX3/HX5)			

Ref. No.	Part No.	Description	Remark
CN308	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P	(HX7)
CN308	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF)) 25P	(HX3/HX5)
CN309	1-779-283-11	CONNECTOR, FFC (LIF (NON-ZIF)) 15P	(HX5/HX7)
CN310	1-784-780-11	CONNECTOR, FFC 19P	
CN313	1-779-277-11	CONNECTOR, FFC (LIF (NON-ZIF)) 9P	
CN314	1-784-776-11	CONNECTOR, FFC 15P (HX7)	
CN316	1-819-131-11	PIN, CONNECTOR 3P (HX7)	
CN318	1-568-828-11	CONNECTOR, FFC 9P	(HX3: CND/HX5: CND, AUS, KR/HX7)
CN318	1-568-830-11	CONNECTOR, FFC 11P(HX3: AEP/HX5: AEP, UK)	
CN320	1-779-542-21	CONNECTOR, FFC (LIF (NON-ZIF)) 5P	
CN321	1-815-443-11	PIN, CONNECTOR (PWB) 2P (HX3)	
CN321	1-815-445-11	PIN, CONNECTOR (PWB) 4P (HX5)	
		< DIODE >	
D203	6-501-582-01	DIODE 1N4002-B5	
D205	6-501-582-01	DIODE 1N4002-B5	
D206	6-501-582-01	DIODE 1N4002-B5	
D207	6-501-582-01	DIODE 1N4002-B5	
D209	6-501-582-01	DIODE 1N4002-B5	(HX3: CND/HX5: CND, AUS, KR)
D210	6-501-193-01	DIODE 1SS355WTE-17	(HX3/HX5)
D211	6-501-582-01	DIODE 1N4002-B5	
D212	6-501-582-01	DIODE 1N4002-B5	
D213	6-501-582-01	DIODE 1N4002-B5	(HX3/HX5)
D216	6-500-335-01	DIODE MC2838-T112-1	(HX7)
D217	6-501-193-01	DIODE 1SS355WTE-17	
D218	6-501-193-01	DIODE 1SS355WTE-17	
D219	6-501-193-01	DIODE 1SS355WTE-17	
D220	6-501-582-01	DIODE 1N4002-B5	
D221	6-501-582-01	DIODE 1N4002-B5	
		< EARTH TERMINAL >	
EP101	1-537-771-21	TERMINAL BOARD, GROUND	
EP102	1-537-771-21	TERMINAL BOARD, GROUND	
EP301	1-537-771-21	TERMINAL BOARD, GROUND	
		< IC/TRANSISTOR >	
IC301	6-807-529-01	IC M3062LFGPFP-712 (for SERVICE)	(HX7)
IC301	6-807-530-01	IC M3062LFGPFP-710 (for SERVICE)	(HX3/HX5)
IC302	6-701-680-01	IC PST3629NR	
IC303	8-759-430-37	IC MC14052BDTR2	(HX7)
IC304	6-710-289-01	IC R2S15904SP	
⚠IC305	6-700-830-01	IC KIA7809API	
⚠IC306	8-759-071-48	IC TA7807S	
⚠IC307	6-703-546-01	IC TA7804LS	
IC308	6-707-282-01	IC MM1615ANLE	
IC310	8-759-430-37	IC MC14052BDTR2	(HX5/HX7)
IC311	8-759-523-03	IC TC74HC4066AFT (EL)	(HX3/HX5)
IC312	8-759-523-03	IC TC74HC4066AFT (EL)	(HX3/HX5)
IC313	6-707-870-01	IC TC74VHC157FT (EKJ)	(HX3/HX5)
IC315	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC316	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC317	8-759-656-83	IC NJM4580MD- (TE2)	
IC318	8-759-523-03	IC TC74HC4066AFT (EL)	(HX7)
IC320	8-759-598-69	IC BA6956AN	

Ref. No.	Part No.	Description	Remark
IC321	8-759-679-36	IC TC7WT125FU (TE12R) (HX7)	
		< SOCKET >	
J301	1-821-210-11	SOCKET, DIN 8P (SIRIUS) (HX7)	
		< JUMPER RESISTOR >	
JR101	1-216-864-11	SHORT CHIP 0 (HX3)	
JR102	1-216-864-11	SHORT CHIP 0	
JR104	1-216-864-11	SHORT CHIP 0 (HX7)	
JR105	1-216-864-11	SHORT CHIP 0 (HX7)	
JR106	1-216-864-11	SHORT CHIP 0 (HX7)	
JR107	1-216-864-11	SHORT CHIP 0 (HX7)	
JR108	1-216-864-11	SHORT CHIP 0 (HX7)	
JR110	1-216-864-11	SHORT CHIP 0 (HX7)	
JR111	1-216-864-11	SHORT CHIP 0 (HX7)	
JR112	1-216-864-11	SHORT CHIP 0 (HX3)	
JR115	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR116	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR301	1-216-864-11	SHORT CHIP 0	
JR302	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR303	1-216-864-11	SHORT CHIP 0 (HX7)	
JR304	1-216-864-11	SHORT CHIP 0	
JR305	1-216-864-11	SHORT CHIP 0	
JR306	1-216-864-11	SHORT CHIP 0 (HX7)	
JR307	1-216-864-11	SHORT CHIP 0 (HX5/HX7)	
JR308	1-216-864-11	SHORT CHIP 0 (HX7)	
JR309	1-216-864-11	SHORT CHIP 0 (HX7)	
JR310	1-216-864-11	SHORT CHIP 0 (HX5/HX7)	
JR311	1-216-864-11	SHORT CHIP 0	
JR312	1-216-864-11	SHORT CHIP 0	
JR313	1-216-864-11	SHORT CHIP 0	
JR314	1-216-864-11	SHORT CHIP 0	
JR315	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR316	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR317	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR318	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR319	1-216-864-11	SHORT CHIP 0	
JR320	1-216-864-11	SHORT CHIP 0	
JR321	1-216-864-11	SHORT CHIP 0	
JR322	1-216-864-11	SHORT CHIP 0	
JR323	1-216-864-11	SHORT CHIP 0	
JR324	1-216-864-11	SHORT CHIP 0	
JR325	1-216-864-11	SHORT CHIP 0	
JR326	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR327	1-216-864-11	SHORT CHIP 0	
JR328	1-216-864-11	SHORT CHIP 0	
JR329	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR330	1-216-864-11	SHORT CHIP 0	
JR331	1-216-864-11	SHORT CHIP 0	
JR332	1-216-864-11	SHORT CHIP 0 (HX7)	
JR341	1-216-296-11	SHORT CHIP 0	
JR342	1-216-296-11	SHORT CHIP 0	
JR343	1-216-296-11	SHORT CHIP 0 (HX7)	
JR344	1-216-296-11	SHORT CHIP 0 (HX7)	
JR345	1-216-296-11	SHORT CHIP 0 (HX7)	
JR346	1-216-296-11	SHORT CHIP 0	
JR347	1-216-296-11	SHORT CHIP 0 (HX7)	
JR348	1-216-296-11	SHORT CHIP 0 (HX3/HX5)	
JR349	1-216-296-11	SHORT CHIP 0	
JR350	1-216-296-11	SHORT CHIP 0	
JR351	1-216-296-11	SHORT CHIP 0 (HX3/HX5)	
JR352	1-216-296-11	SHORT CHIP 0 (HX3/HX5)	
JR353	1-216-296-11	SHORT CHIP 0 (HX3/HX5)	
JR354	1-216-296-11	SHORT CHIP 0 (HX3/HX5)	
		< TRANSISTOR >	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (HX5/HX7)	
Q303	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q304	8-729-027-23	TRANSISTOR DTA114EKA-T146	
⚠Q305	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q306	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q307	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q308	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
Q309	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
Q311	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
⚠Q312	8-729-037-13	TRANSISTOR KTA1271Y	
Q313	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q314	8-729-600-22	TRANSISTOR 2SA1235-F (HX7)	
Q315	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
Q316	8-729-600-22	TRANSISTOR 2SA1235-F (HX7)	
Q317	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
Q320	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX7)	
Q321	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX3/HX5)	
Q323	8-729-037-13	TRANSISTOR KTA1271Y (HX5/HX7)	
Q324	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX5/HX7)	
Q325	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q326	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q327	8-729-037-13	TRANSISTOR KTA1271Y (HX3/HX5)	
Q328	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX5/HX7)	
Q329	8-729-027-43	TRANSISTOR DTC114EKA-T146 (HX3/HX5)	
Q330	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (HX3/HX5)	
		< RESISTOR >	
R101	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R103	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R105	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	(HX5/HX7)
R106	1-216-841-11	METAL CHIP 47K 5% 1/10W	(HX5/HX7)
R107	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R108	1-216-813-11	METAL CHIP 220 5% 1/10W	
R109	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R110	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R111	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R112	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R113	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R114	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R115	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R116	1-216-805-11	METAL CHIP 47 5% 1/10W	
R117	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R118	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R119	1-216-845-11	METAL CHIP 100K 5% 1/10W	(HX7)

MAIN

Ref. No.	Part No.	Description			Remark
R120	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX5/HX7)
R124	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R126	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R127	1-216-837-11	METAL CHIP	22K	5%	1/10W
R128	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R129	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R130	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (HX7)
R131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX5/HX7)
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R135	1-216-841-11	METAL CHIP	47K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-841-11	METAL CHIP	47K	5%	1/10W
R203	1-216-821-11	METAL CHIP	1K	5%	1/10W
R205	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R206	1-216-841-11	METAL CHIP	47K	5%	1/10W (HX5/HX7)
R207	1-216-841-11	METAL CHIP	47K	5%	1/10W
R208	1-216-813-11	METAL CHIP	220	5%	1/10W
R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R212	1-216-845-11	METAL CHIP	100K	5%	1/10W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R215	1-216-837-11	METAL CHIP	22K	5%	1/10W
R216	1-216-805-11	METAL CHIP	47	5%	1/10W
R217	1-216-845-11	METAL CHIP	100K	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R219	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R220	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R221	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R224	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R226	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R228	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R229	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R230	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (HX7)
R231	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX5/HX7)
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R233	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R234	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R235	1-216-841-11	METAL CHIP	47K	5%	1/10W
R243	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R248	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX5/HX7)
R249	1-216-817-11	METAL CHIP	470	5%	1/10W (HX5/HX7)
R250	1-216-837-11	METAL CHIP	22K	5%	1/10W (HX5/HX7)
R251	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5/HX7)
R257	1-216-841-11	METAL CHIP	47K	5%	1/10W
R258	1-216-833-11	METAL CHIP	10K	5%	1/10W
R259	1-216-841-11	METAL CHIP	47K	5%	1/10W
R260	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-809-11	METAL CHIP	100	5%	1/10W
R304	1-216-809-11	METAL CHIP	100	5%	1/10W
R305	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R306	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W
R311	1-216-849-11	METAL CHIP	220K	5%	1/10W
R313	1-216-864-11	SHORT CHIP	0		
R316	1-216-864-11	SHORT CHIP	0		
R318	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3: AEP/HX5: AEP, UK)
R319	1-216-809-11	METAL CHIP	100	5%	1/10W
R320	1-216-841-11	METAL CHIP	47K	5%	1/10W
R321	1-216-809-11	METAL CHIP	100	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-809-11	METAL CHIP	100	5%	1/10W
R326	1-216-809-11	METAL CHIP	100	5%	1/10W
R327	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R328	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R331	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-809-11	METAL CHIP	100	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX3/HX5)
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-809-11	METAL CHIP	100	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)

Ref. No.	Part No.	Description			Remark
R338	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R341	1-216-817-11	METAL CHIP	470	5%	1/10W (HX3/HX5)
R342	1-216-809-11	METAL CHIP	100	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-809-11	METAL CHIP	100	5%	1/10W
R346	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX3/HX5)
R347	1-216-841-11	METAL CHIP	47K	5%	1/10W (HX3/HX5)
R348	1-216-809-11	METAL CHIP	100	5%	1/10W
R349	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R354	1-216-797-11	METAL CHIP	10	5%	1/10W (HX7)
R355	1-216-864-11	SHORT CHIP	0 (HX7)		
R356	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R357	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R358	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R359	1-216-864-11	SHORT CHIP	0 (HX7)		
R360	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R361	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R363	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R365	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R366	1-216-864-11	SHORT CHIP	0 (HX3)		
R367	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX3: CND/HX5: CND/HX7)
R367	1-216-864-11	SHORT CHIP	0 (HX5: AUS, KR)		
R368	1-216-809-11	METAL CHIP	100	5%	1/10W
R369	1-216-809-11	METAL CHIP	100	5%	1/10W
R370	1-216-809-11	METAL CHIP	100	5%	1/10W
R371	1-216-817-11	METAL CHIP	470	5%	1/10W
R372	1-216-817-11	METAL CHIP	470	5%	1/10W
R373	1-216-817-11	METAL CHIP	470	5%	1/10W
R374	1-216-857-11	METAL CHIP	1M	5%	1/10W
R375	1-216-809-11	METAL CHIP	100	5%	1/10W
R376	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3)
R377	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R378	1-216-809-11	METAL CHIP	100	5%	1/10W
R380	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
R385	1-216-833-11	METAL CHIP	10K	5%	1/10W
R386	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3: AEP/HX5: AEP, UK)
R387	1-216-809-11	METAL CHIP	100	5%	1/10W
R388	1-216-809-11	METAL CHIP	100	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R391	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R392	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R393	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R394	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R396	1-216-833-11	METAL CHIP	10K	5%	1/10W
R398	1-216-841-11	METAL CHIP	47K	5%	1/10W
R399	1-216-817-11	METAL CHIP	470	5%	1/10W
R400	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-841-11	METAL CHIP	47K	5%	1/10W
R402	1-216-841-11	METAL CHIP	47K	5%	1/10W
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX3/HX5)
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R413	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R414	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX7)
R415	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R416	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX7)
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R418	1-216-864-11	SHORT CHIP	0 (HX3: CND/HX5: CND, AUS, KR/HX7)		
R419	1-217-806-11	RES-CHIP	1	5%	1/8W
R420	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-845-11	METAL CHIP	100K	5%	1/10W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W
R423	1-216-837-11	METAL CHIP	22K	5%	1/10W
R425	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX7)
R426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R427	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R428	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R431	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R432	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX3)
R433	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-833-11	METAL CHIP	10K	5%	1/10W
R435	1-216-837-11	METAL CHIP	22K	5%	1/10W
R441	1-216-833-11	METAL CHIP	10K	5%	1/10W
R446	1-216-833-11	METAL CHIP	10K	5%	1/10W
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN **MOTOR** **SPEAKER** **SUB POWER**

Ref. No.	Part No.	Description			Remark
R451	1-216-833-11	METAL CHIP	10K	5%	1/10W
R452	1-216-864-11	SHORT CHIP	0		
R453	1-216-864-11	SHORT CHIP	0		
R461	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX3)
R466	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R467	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX3: CND/HX5: CND/HX7)
R467	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX3: AEP/HX5: AEP, UK)
R468	1-216-833-11	METAL CHIP	10K	5%	1/10W
R469	1-216-833-11	METAL CHIP	10K	5%	1/10W
R481	1-216-833-11	METAL CHIP	10K	5%	1/10W
R482	1-216-833-11	METAL CHIP	10K	5%	1/10W
R483	1-216-833-11	METAL CHIP	10K	5%	1/10W
R489	1-216-864-11	SHORT CHIP	0		(HX3: CND/HX5: CND, AUS, KR/HX7)
R491	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX3/HX5)
		< VIBRATOR >			
X301	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X302	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
**********					
		MOTOR BOARD			
		**********			
		< CONNECTOR >			
CN001	1-815-412-11	CONNECTOR, FFC/FPC 5P			
		< SWITCH >			
S001	1-786-509-11	SWITCH, ROTARY (DISC TRAY OPEN/CLOSE DETECT)			
**********					
		SPEAKER BOARD			
		**********			
		< CAPACITOR >			
C851	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C852	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C853	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C854	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
		< CONNECTOR >			
CN850	1-819-145-11	PIN, CONNECTOR 3P			
CN870	1-819-144-11	PIN, CONNECTOR 2P			
		< TERMINAL BOARD >			
J860	1-537-114-21	TERMINAL BOARD (SPEAKER)			
**********					
		SUB POWER BOARD			
		**********			
		< CAPACITOR >			
⚠C602	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
⚠C603	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
⚠C604	1-126-960-11	ELECT	1uF	20%	50V
C611	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C612	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
⚠C615	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C652	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C653	1-137-649-31	ELECT	220uF	20%	10V
C654	1-126-923-91	ELECT	220uF	20%	10V
		< DIODE >			
⚠D602	8-719-073-23	DIODE ST02D-200TA			
⚠D603	6-500-567-31	DIODE 10ERB20-TB3			
⚠D604	6-500-567-31	DIODE 10ERB20-TB3			
		< IC >			
⚠IC601	6-708-726-01	IC MIP2F20MS1SO			
⚠IC650	6-705-280-01	IC FAN431AZXA			
		< COIL >			
L602	1-412-525-31	INDUCTOR	10uH		
		< PHOTO COUPLER >			
⚠PH601	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
		< TRANSISTOR >			
⚠Q615	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
⚠R603	1-216-853-11	METAL CHIP	470K	5%	1/10W
⚠R604	1-249-401-11	CARBON	47	5%	1/4W F
⚠R605	1-216-835-11	METAL CHIP	15K	5%	1/10W
⚠R606	1-249-381-11	CARBON	1	5%	1/4W F
⚠R607	1-216-864-11	SHORT CHIP	0		
⚠R615	1-245-494-31	METAL	2.2M	2%	1/4W F
⚠R616	1-216-845-11	METAL CHIP	100K	5%	1/10W
⚠R617	1-216-864-11	SHORT CHIP	0		
⚠R618	1-245-494-31	METAL	2.2M	2%	1/4W F
⚠R619	1-216-849-11	METAL CHIP	220K	5%	1/10W
R651	1-216-821-11	METAL CHIP	1K	5%	1/10W
R652	1-216-817-11	METAL CHIP	470	5%	1/10W
R655	1-218-863-11	METAL CHIP	4.7K	0.50%	1/10W
R656	1-218-879-11	METAL CHIP	22K	0.50%	1/10W
R657	1-216-805-11	METAL CHIP	47	5%	1/10W
R658	1-218-887-11	METAL CHIP	47K	0.50%	1/10W
		< TRANSFORMER >			
⚠T603	1-443-942-11	TRANSFORMER, DC-DC CONVERTER			
		< EARTH TERMINAL >			
* TK601	1-537-738-21	TERMINAL, EARTH			
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SWITCHING POWER

Ref. No.	Part No.	Description			Remark
	A-1243-020-A	SWITCHING POWER BOARD, COMPLETE			(HX3: CND/HX7)
	A-1243-203-A	SWITCHING POWER BOARD, COMPLETE			(HX5: AEP, UK, AUS, KR)
	A-1243-278-A	SWITCHING POWER BOARD, COMPLETE			(HX3: AEP)
	A-1243-762-A	SWITCHING POWER BOARD, COMPLETE			(HX5: CND)
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
⚠C1	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C2	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C4	1-112-876-51	CERAMIC	470PF	10%	250V (HX3: CND/HX5: CND/HX7)
⚠C4	1-119-886-51	CERAMIC	470PF	10%	250V (HX3: AEP/HX5: AEP, UK, AUS, KR)
⚠C5	1-112-876-51	CERAMIC	470PF	10%	250V (HX3: CND/HX5: CND/HX7)
⚠C5	1-119-886-51	CERAMIC	470PF	10%	250V (HX3: AEP/HX5: AEP, UK, AUS, KR)
⚠C11	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (HX3: CND/HX7)
⚠C11	1-100-923-21	ELECT	100uF	20%	450V (HX3: AEP)
⚠C11	1-114-237-21	ELECT	130uF	20%	450V (HX5: AEP, UK, AUS, KR)
⚠C11	1-114-366-11	ELECT (BLOCK)	560uF	20%	250V (HX5: CND)
⚠C12	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (HX3: CND/HX7)
⚠C12	1-114-366-11	ELECT (BLOCK)	560uF	20%	250V (HX5: CND)
⚠C13	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C14	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
⚠C15	1-126-964-11	ELECT	10uF	20%	50V
⚠C16	1-126-963-11	ELECT	4.7uF	20%	50V
⚠C17	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
⚠C18	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
⚠C19	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C20	1-126-947-11	ELECT	47uF	20%	35V
⚠C21	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
⚠C22	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C23	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C24	1-100-400-11	FILM	39000PF	3%	1KV (HX5)
⚠C24	1-165-610-11	FILM	33000PF	3%	800V (HX3/HX7)
⚠C25	1-126-949-11	ELECT	220uF	20%	35V
C31	1-128-951-21	ELECT	2200uF	20%	16V
C32	1-100-924-21	ELECT	2200uF	20%	35V (HX5)
C32	1-137-806-21	ELECT	1800uF	20%	35V (HX3/HX7)
C34	1-126-934-11	ELECT	220uF	20%	16V
C35	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C39	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
⚠C606	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C609	1-126-964-11	ELECT	10uF	20%	50V
C651	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
		< CONNECTOR >			
CN1	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
CN31	1-819-132-11	PIN, CONNECTOR 4P			
CN33	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
		< DIODE >			
⚠D1	8-719-077-77	DIODE D3SB60F3			
⚠D2	8-719-081-58	DIODE S2V60-TA (HX3: CND/HX5: CND/HX7)			
⚠D3	8-719-081-58	DIODE S2V60-TA (HX3: CND/HX5: CND/HX7)			
⚠D11	8-719-979-64	DIODE UF4005/23			
⚠D14	6-500-567-31	DIODE 10ERB20-TB3			
⚠D15	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D16	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D17	8-719-060-48	DIODE RB751V-40TE-17			
⚠D31	8-719-510-09	DIODE D10SC6M			
⚠D32	6-501-518-01	DIODE RB085T-90			
D33	8-719-983-22	DIODE MTZJ-T-77-27A (HX3/HX7)			
D33	8-719-982-15	DIODE MTZJ-27B (HX5)			
D652	6-501-179-01	DIODE UDZW-TE17-16B			
		< FUSE >			
⚠F1	1-576-232-51	FUSE (H.B.C.) (5A/250V)			
		< FERRITE BEAD >			
⚠FB11	1-410-397-21	FERRITE	1.1uH		
		< FUSE HOLDER >			
FH1	1-533-233-31	FUSE HOLDER			
FH2	1-533-233-31	FUSE HOLDER			
		< IC >			
⚠IC11	6-707-749-01	IC CXD9841P			
⚠IC12	8-759-231-58	IC TA7812S			
		< CAPACITOR >			
JR30	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
JR31	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
JR32	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< PHOTO COUPLER >			
⚠PH11	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
⚠PH602	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
		< TRANSISTOR >			
⚠Q11	6-551-302-11	FET	2SK3561		
⚠Q12	6-551-302-11	FET	2SK3561		
⚠Q601	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q650	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q651	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q652	8-729-600-22	TRANSISTOR	2SA1235-F		

SWITCHING POWER | **TOP PANEL (FUNCTION)** | **TOP PANEL (PLAY)**

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
⚠R1	1-219-512-11	METAL	2.2M	5%	1/2W F
			(HX3: CND/HX5: CND/HX7)		
⚠R2	1-219-512-11	METAL	2.2M	5%	1/2W F
⚠R10	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
					(HX5)
⚠R11	1-216-864-11	SHORT CHIP	0		
⚠R12	1-245-502-31	METAL	4.7M	2%	1/4W F
⚠R13	1-245-502-31	METAL	4.7M	2%	1/4W F
⚠R14	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
⚠R15	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
					(HX3/HX7)
⚠R15	1-218-877-11	METAL CHIP	18K	0.5%	1/10W
					(HX5)
⚠R16	1-218-823-11	METAL CHIP	100	0.5%	1/10W
⚠R17	1-211-991-11	METAL CHIP	82	0.5%	1/10W
					(HX5)
⚠R17	1-218-823-11	METAL CHIP	100	0.5%	1/10W
					(HX3/HX7)
⚠R18	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R20	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R22	1-249-417-11	CARBON	1K	5%	1/4W F
⚠R23	1-219-984-51	METAL	0.1	2%	2W F
⚠R24	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R25	1-247-694-11	CARBON	33	5%	1/4W F
⚠R27	1-216-797-11	METAL CHIP	10	5%	1/10W
⚠R29	1-216-797-11	METAL CHIP	10	5%	1/10W
R32	1-216-821-11	METAL CHIP	1K	5%	1/10W
R33	1-216-817-11	METAL CHIP	470	5%	1/10W
R41	1-216-845-11	METAL CHIP	100K	5%	1/10W
⚠R608	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R609	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
					(HX3/HX7)
⚠R609	1-218-901-11	METAL CHIP	180K	0.5%	1/10W
					(HX5)
⚠R610	1-218-905-11	METAL CHIP	270K	0.5%	1/10W
					(HX3/HX7)
⚠R610	1-218-907-11	METAL CHIP	330K	0.5%	1/10W
					(HX5)
R653	1-216-833-11	METAL CHIP	10K	5%	1/10W
R654	1-216-841-11	METAL CHIP	47K	5%	1/10W
R659	1-216-821-11	METAL CHIP	1K	5%	1/10W
R660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R661	1-216-833-11	METAL CHIP	10K	5%	1/10W
R662	1-216-833-11	METAL CHIP	10K	5%	1/10W
R663	1-216-817-11	METAL CHIP	470	5%	1/10W
		< TRANSFORMER >			
⚠T1	1-445-048-21	TRANSFORMER, LINE FILTER (HX3: AEP)			
⚠T1	1-457-125-21	COIL, LINE FILTER (HX5: CND)			
⚠T1	1-457-326-21	COIL, LINE FILTER			
		(HX3: CND/HX5: AEP, UK, AUS, KR/HX7)			
⚠T31	1-445-162-11	TRANSFORMER, CONVERTER (HX5)			
⚠T31	1-445-163-11	TRANSFORMER, CONVERTER (HX3/HX7)			
		< THERMISTOR >			
⚠TH1	1-802-075-11	THERMISTOR, NTC			
		(HX3: AEP/HX5: AEP, UK, AUS, KR)			
⚠TH1	1-805-901-11	THERMISTOR, NTC (HX3: CND/HX5: CND/HX7)			
⚠TH2	1-805-901-11	THERMISTOR, NTC (HX3: CND/HX5: CND/HX7)			

Ref. No.	Part No.	Description			Remark
		< EARH TERMINAL >			
* TK1	1-537-738-21	TERMINAL, EARTH			
* TK3	1-537-738-21	TERMINAL, EARTH			
		< VARISTOR >			
⚠VR001	1-805-481-21	VARISTOR (HX3: CND/HX5: CND/HX7)			
⚠VR001	1-805-482-11	VARISTOR (HX3: AEP/HX5: AEP, UK, AUS, KR)			
**********					
		TOP PANEL (FUNCTION) BOARD			
		**********			
		< CONNECTOR >			
CN905	1-784-727-11	CONNECTOR, FFC 5P			
		< RESISTOR >			
R971	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(HX3)
R971	1-216-864-11	SHORT CHIP	0 (HX5/HX7)		
R972	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(HX5/HX7)
R972	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
					(HX3)
R973	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R974	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
					(HX5/HX7)
R974	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX3)
R975	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX5/HX7)
R975	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX3)
R976	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX5/HX7)
R976	1-216-864-11	SHORT CHIP	0 (HX3)		
		< SWITCH >			
S970	1-762-875-21	SWITCH, KEYBOARD (USB ▶II) (HX3)			
S970	1-762-875-21	SWITCH, KEYBOARD (BLUETOOTH ▶II)			
					(HX5/HX7)
S971	1-762-875-21	SWITCH, KEYBOARD (CD ▶II) (HX3/HX7)			
S971	1-762-875-21	SWITCH, KEYBOARD (USB ▶II) (HX5)			
S972	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)(HX3/HX7)			
S972	1-762-875-21	SWITCH, KEYBOARD (CD ▶II) (HX5)			
S973	1-762-875-21	SWITCH, KEYBOARD (AUDIO IN) (HX3/HX7)			
S973	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND) (HX5)			
S974	1-762-875-21	SWITCH, KEYBOARD (FUNCTION) (HX3/HX7)			
S974	1-762-875-21	SWITCH, KEYBOARD (AUDIO IN) (HX5)			
**********					
		TOP PANEL (PLAY) BOARD			
		**********			
		< CONNECTOR >			
CN907	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
		< RESISTOR >			
R952	1-216-841-11	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R963	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R965	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R966	1-216-833-11	METAL CHIP	10K	5%	1/10W
R967	1-216-837-11	METAL CHIP	22K	5%	1/10W
R977	1-216-837-11	METAL CHIP	22K	5%	1/10W
R978	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
S953	1-762-875-21	SWITCH, KEYBOARD (⏮ ◀◀, TUNE –)			
S961	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S962	1-762-875-21	SWITCH, KEYBOARD (DSGX)			
S963	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE/TUNING MODE)			
S965	1-762-875-21	SWITCH, KEYBOARD (▶▶ ⏭, TUNE +)			
S966	1-762-875-21	SWITCH, KEYBOARD (SELECT FOLDER +)			
S967	1-762-875-21	SWITCH, KEYBOARD (ENTER)			
S968	1-762-875-21	SWITCH, KEYBOARD (SELECT FOLDER –)			
S975	1-762-875-21	SWITCH, KEYBOARD (■/CANCEL)			
S976	1-762-875-21	SWITCH, KEYBOARD (SEARCH)			
**********					
	A-1244-345-A	USB BOARD, COMPLETE (HX3/HX5) **********			
		< CAPACITOR/JUMPER RESISTOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-124-779-00	ELECT CHIP	10uF	20%	16V
C903	1-124-779-00	ELECT CHIP	10uF	20%	16V
C904	1-124-779-00	ELECT CHIP	10uF	20%	16V
C905	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C908	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C909	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C910	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C912	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C913	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C914	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C915	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C916	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C917	1-100-354-21	ELECT CHIP	220uF	20%	6.3V
C918	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C920	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C922	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C930	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN902	1-794-548-21	CONNECTOR, USB (A) (USB)			
CN904	1-784-859-51	CONNECTOR, FFC (LIF (NON-ZIF)) 7P			
CN905	1-784-871-51	CONNECTOR, FFC (LIF (NON-ZIF)) 19P			
CN908	1-770-469-21	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D901	6-501-579-01	DIODE MC2837			
D902	6-501-579-01	DIODE MC2837			
D905	6-501-579-01	DIODE MC2837			

Ref. No.	Part No.	Description			Remark
		< EARTH TERMINAL >			
EP901	1-537-771-21	TERMINAL BOARD, GROUND			
		< JUMPER RESISTOR/FERRITE BEAD >			
FB901	1-216-295-00	SHORT CHIP	0		
FB902	1-414-233-22	INDUCTOR, FERRITE BEAD			
		< IC >			
IC901	6-711-265-01	IC TMP92CD28FG-2CB2			
IC915	6-710-887-01	IC R5523N001B-TR-F			
IC921	6-704-832-01	IC IS61LV6416-10TLT			
		< JUMPER RESISTOR >			
JR902	1-216-295-00	SHORT CHIP	0		
		< RESISTOR >			
R901	1-216-833-11	METAL CHIP	10K	5%	1/10W
R902	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R903	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R904	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R905	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R906	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R907	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R913	1-216-845-11	METAL CHIP	100K	5%	1/10W
R915	1-216-833-11	METAL CHIP	10K	5%	1/10W
R916	1-216-864-11	SHORT CHIP	0		
R917	1-216-864-11	SHORT CHIP	0		
R919	1-216-809-11	METAL CHIP	100	5%	1/10W
R920	1-216-833-11	METAL CHIP	10K	5%	1/10W
R921	1-216-845-11	METAL CHIP	100K	5%	1/10W
R922	1-216-845-11	METAL CHIP	100K	5%	1/10W
R923	1-216-802-11	METAL CHIP	27	5%	1/10W
R924	1-216-802-11	METAL CHIP	27	5%	1/10W
R925	1-216-835-11	METAL CHIP	15K	5%	1/10W
R926	1-216-835-11	METAL CHIP	15K	5%	1/10W
R928	1-216-864-11	SHORT CHIP	0		
R932	1-216-809-11	METAL CHIP	100	5%	1/10W
R933	1-216-864-11	SHORT CHIP	0		
R934	1-216-833-11	METAL CHIP	10K	5%	1/10W
R937	1-216-809-11	METAL CHIP	100	5%	1/10W
R938	1-216-809-11	METAL CHIP	100	5%	1/10W
R941	1-216-845-11	METAL CHIP	100K	5%	1/10W
R942	1-216-845-11	METAL CHIP	100K	5%	1/10W
R943	1-216-845-11	METAL CHIP	100K	5%	1/10W
R944	1-216-845-11	METAL CHIP	100K	5%	1/10W
R946	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R948	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R970	1-216-809-11	METAL CHIP	100	5%	1/10W
R971	1-216-809-11	METAL CHIP	100	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R973	1-216-809-11	METAL CHIP	100	5%	1/10W
R974	1-216-809-11	METAL CHIP	100	5%	1/10W
R975	1-216-809-11	METAL CHIP	100	5%	1/10W
R976	1-216-809-11	METAL CHIP	100	5%	1/10W
R977	1-216-809-11	METAL CHIP	100	5%	1/10W

USB **USB POWER** **XM**

Ref. No.	Part No.	Description			Remark
R978	1-216-809-11	METAL CHIP	100	5%	1/10W
R979	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-809-11	METAL CHIP	100	5%	1/10W
R982	1-216-809-11	METAL CHIP	100	5%	1/10W
R983	1-216-809-11	METAL CHIP	100	5%	1/10W
R984	1-216-809-11	METAL CHIP	100	5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB921	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB922	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB923	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB924	1-234-944-21	RES, NETWORK 47 (1005X4)			
		< VIBRATOR >			
X901	1-813-931-21	VIBRATOR, CRYSTAL (9MHz)			
**********					
		USB POWER BOARD (HX3/HX5)			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C324	1-128-952-31	ELECT	220uF	20%	25V
C325	1-128-951-21	ELECT	2200uF	20%	16V
C358	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D208	6-500-080-11	DIODE 21DQ04N-TA2B1			
		< IC >			
⚠IC319	6-710-940-01	IC SI-8008TFE			
		< JUMPER RESISTOR >			
JR360	1-216-296-11	SHORT CHIP	0		
JR361	1-216-296-11	SHORT CHIP	0		
		< COIL >			
L101	1-400-424-11	CHOKE, COIL	47uH		
		< RESISTOR >			
R307	1-216-845-11	METAL CHIP	100K	5%	1/10W
R314	1-216-821-11	METAL CHIP	1K	5%	1/10W
R315	1-216-864-11	SHORT CHIP	0		
R317	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R409	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
**********					
	A-1184-933-A	XM BOARD, COMPLETE (HX7)			
		**********			
		< CAPACITOR >			
C001	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C002	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C003	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C004	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C005	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C006	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C007	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C008	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C009	1-128-993-21	ELECT CHIP	22uF	20%	10V
C010	1-128-993-21	ELECT CHIP	22uF	20%	10V
C011	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C012	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C014	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C015	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C016	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C017	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C018	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C019	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C023	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C024	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C041	1-128-993-21	ELECT CHIP	22uF	20%	10V
C042	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C043	1-124-779-00	ELECT CHIP	10uF	20%	16V
C044	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C051	1-128-993-21	ELECT CHIP	22uF	20%	10V
C052	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C053	1-128-996-11	ELECT CHIP	4.7uF	20%	50V
C055	1-124-779-00	ELECT CHIP	10uF	20%	16V
C056	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C057	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C061	1-216-864-11	SHORT CHIP	0		
C062	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C063	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C064	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C065	1-124-779-00	ELECT CHIP	10uF	20%	16V
C066	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C067	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
		< CONNECTOR >			
CN001	1-793-580-11	CONNECTOR, FFC (LIF (NON-Z1F)) 15P			
		< DIODE >			
D011	6-500-848-01	DIODE MC2840-T112-1			
D012	6-500-848-01	DIODE MC2840-T112-1			
		< JUMPER RESISTOR/FERRITE BEAD >			
FB001	1-216-295-00	SHORT CHIP	0		
FB002	1-216-295-00	SHORT CHIP	0		
FB021	1-216-295-00	SHORT CHIP	0		
FB022	1-216-295-00	SHORT CHIP	0		
FB041	1-414-813-11	FERRITE, EMI (SMD) (2012)			
		< IC >			
IC001	6-709-251-01	IC F2602E-01-TR			
IC041	6-708-476-01	IC AK4384ET-E2			
IC051	8-759-656-83	IC NJM4580MD- (TE2)			
		< CONNECTOR >			
J001	1-793-642-21	CONNECTOR (USB) (4P), SQUARE (XM)			

Ref. No.	Part No.	Description			Remark
		< COIL >			
L001	1-469-523-91	INDUCTOR	2.2uH		
L002	1-469-523-91	INDUCTOR	2.2uH		
		< TRANSISTOR >			
Q001	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q003	6-551-248-01	FET	NTJS3151PT1G		
		< RESISTOR >			
R001	1-216-845-11	METAL CHIP	100K	5%	1/10W
R002	1-216-845-11	METAL CHIP	100K	5%	1/10W
R003	1-216-845-11	METAL CHIP	100K	5%	1/10W
R004	1-216-845-11	METAL CHIP	100K	5%	1/10W
R005	1-216-845-11	METAL CHIP	100K	5%	1/10W
R006	1-216-845-11	METAL CHIP	100K	5%	1/10W
R007	1-216-833-11	METAL CHIP	10K	5%	1/10W
R008	1-216-821-11	METAL CHIP	1K	5%	1/10W
R009	1-216-821-11	METAL CHIP	1K	5%	1/10W
R010	1-216-809-11	METAL CHIP	100	5%	1/10W
R011	1-216-809-11	METAL CHIP	100	5%	1/10W
R012	1-216-845-11	METAL CHIP	100K	5%	1/10W
R014	1-216-809-11	METAL CHIP	100	5%	1/10W
R015	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R016	1-216-817-11	METAL CHIP	470	5%	1/10W
R017	1-216-809-11	METAL CHIP	100	5%	1/10W
R018	1-216-809-11	METAL CHIP	100	5%	1/10W
R019	1-216-809-11	METAL CHIP	100	5%	1/10W
R020	1-216-837-11	METAL CHIP	22K	5%	1/10W
R021	1-216-809-11	METAL CHIP	100	5%	1/10W
R022	1-216-809-11	METAL CHIP	100	5%	1/10W
R023	1-216-809-11	METAL CHIP	100	5%	1/10W
R024	1-216-809-11	METAL CHIP	100	5%	1/10W
R025	1-216-809-11	METAL CHIP	100	5%	1/10W
R026	1-216-809-11	METAL CHIP	100	5%	1/10W
R031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R032	1-216-841-11	METAL CHIP	47K	5%	1/10W
R033	1-216-841-11	METAL CHIP	47K	5%	1/10W
R034	1-216-841-11	METAL CHIP	47K	5%	1/10W
R035	1-216-841-11	METAL CHIP	47K	5%	1/10W
R036	1-216-833-11	METAL CHIP	10K	5%	1/10W
R037	1-216-833-11	METAL CHIP	10K	5%	1/10W
R051	1-216-841-11	METAL CHIP	47K	5%	1/10W
R052	1-216-841-11	METAL CHIP	47K	5%	1/10W
R055	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R056	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R057	1-216-821-11	METAL CHIP	1K	5%	1/10W
R065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R066	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R067	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< VIBRATOR >			
X001	1-760-841-11	VIBRATOR, CRYSTAL (45.158MHz)			

****

Ref. No.	Part No.	Description			Remark
		XM REGULATOR BOARD (HX7)			
		**********			
		< CAPACITOR >			
C359	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C360	1-126-923-91	ELECT	220uF	20%	10V
		< DIODE >			
D215	8-719-085-36	DIODE 11EQS04-TB5			
		< IC >			
⚠IC309	8-759-646-52	IC KIA7805API			

****

		MISCELLANEOUS	
		**********	
102	1-832-589-21	CABLE, FLEXIBLE FLAT (15 CORE) (HX5/HX7)	
108	1-834-115-11	CABLE, COAXIAL (WITH U.F.L CONNECTOR	(HX5/HX7)
158	1-831-756-21	CABLE, FLEXIBLE FLAT (5 CORE)	
159	1-831-797-21	CABLE, FLEXIBLE FLAT (17 CORE)	
202	1-833-048-21	CABLE, FLEXIBLE FLAT (15 CORE) (HX7)	
208	1-832-535-21	CABLE, FLEXIBLE FLAT (5 CORE)	
251	1-832-608-21	CABLE, FLEXIBLE FLAT (19 CORE) (HX3/HX5)	
253	1-832-815-21	CABLE, FLEXIBLE FLAT (9 CORE)	(HX3: CND/HX5: CND, AUS, SP, KR/HX7)
253	1-832-825-21	CABLE, FLEXIBLE FLAT (11 CORE)	(HX3: AEP/HX5: AEP, UK)
254	1-693-733-21	TUNER (FM/AM) (HX3: CND/HX5: CND/HX7)	
254	1-693-734-11	TUNER (FM/AM) (HX5: AUS)	
254	1-693-734-21	TUNER (FM/AM) (HX5: SP)	
254	1-693-735-11	TUNER (FM/AM) (HX5: KR)	
254	1-693-736-11	TUNER (FM/AM) (HX3: AEP/HX5: AEP, UK)	
255	1-457-368-11	CORE, FERRITE (HX5)	
⚠256	1-769-079-41	CORD, POWER (HX5: KR)	
⚠256	1-769-744-81	CORD, POWER (HX5: UK)	
⚠256	1-775-790-71	CORD, POWER (HX5: AUS)	
⚠256	1-830-188-11	CORD, POWER (HX3: AEP/HX5: AEP, SP)	
⚠256	1-830-190-11	CORD, POWER (HX3: CND/HX5: CND/HX7)	
259	1-832-865-21	CABLE, FLEXIBLE FLAT (19 CORE)	
260	1-400-932-11	FILTER, CLAMP	
301	A-1242-967-A	LOADING (BK) ASSY	
306	1-832-615-21	CABLE, FLEXIBLE FLAT (21 CORE) (HX7)	
306	1-832-635-21	CABLE, FLEXIBLE FLAT (25 CORE) (HX3/HX5)	
⚠351	A-4735-357-A	BASE ASSY, OP (KSM-213D)	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
M901	1-787-652-11	FAN, D. C. (50 SQUARE) (HX5: SP)	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	

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		ACCESSORIES	
		**********	
⚠	1-569-008-22	ADAPTOR, CONVERSION 2P (HX5: SP)	
⚠	1-770-019-61	ADAPTOR, CONVERSION PLUG (HX5: UK)	

Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

MEMO

HCD-HX3/HX5/HX7

SONY

SERVICE MANUAL

Ver. 1.2 2007.06

US Model
HCD-HX7
Canadian Model
AEP Model
E Model
HCD-HX3/HX5
UK Model
Australian Model
HCD-HX5

SUPPLEMENT-1

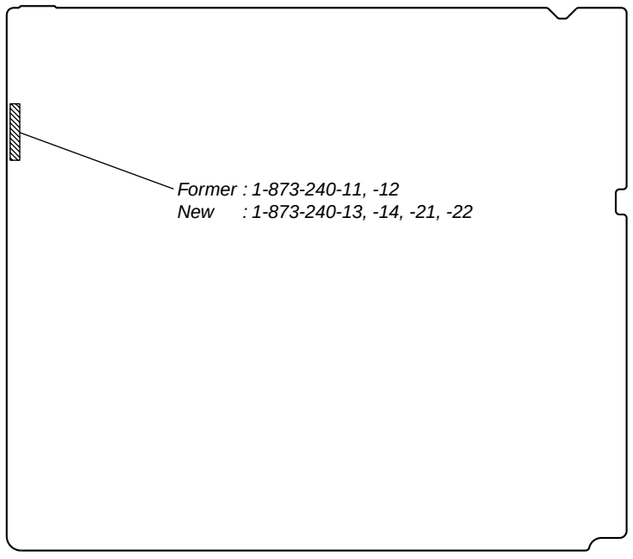
File this supplement with the service manual.

Subject: Change of USB POWER board (Suffix-12, -13, -14, -21, -22)
Change of MAIN and SWITCHING POWER boards (Suffix-13, -14, -21, -22)

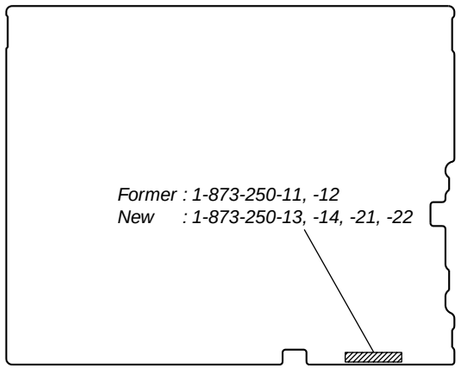
In this set, MAIN, SWITCHING POWER and USB POWER boards have been changed in the midway of production.
Printed wiring board, schematic diagrams and electrical parts list of new type are described in this supplement-1.
Refer to original service manual for other information.

1. NEW/FORMER DISCRIMINATION

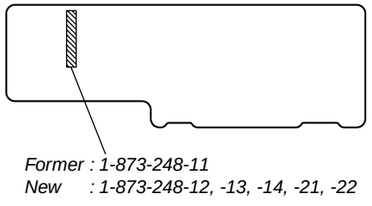
– MAIN Board (Component Side) –



– SWITCHING POWER Board (Component Side) –



– USB POWER Board (Component Side) –

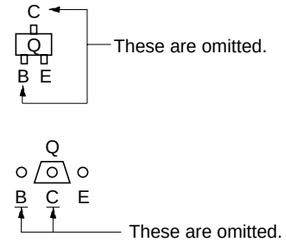


2. DIAGRAMS

- **Note For Printed Wiring Boards and Schematic Diagrams**

Note on Printed Wiring Board:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)
- Indication of transistor

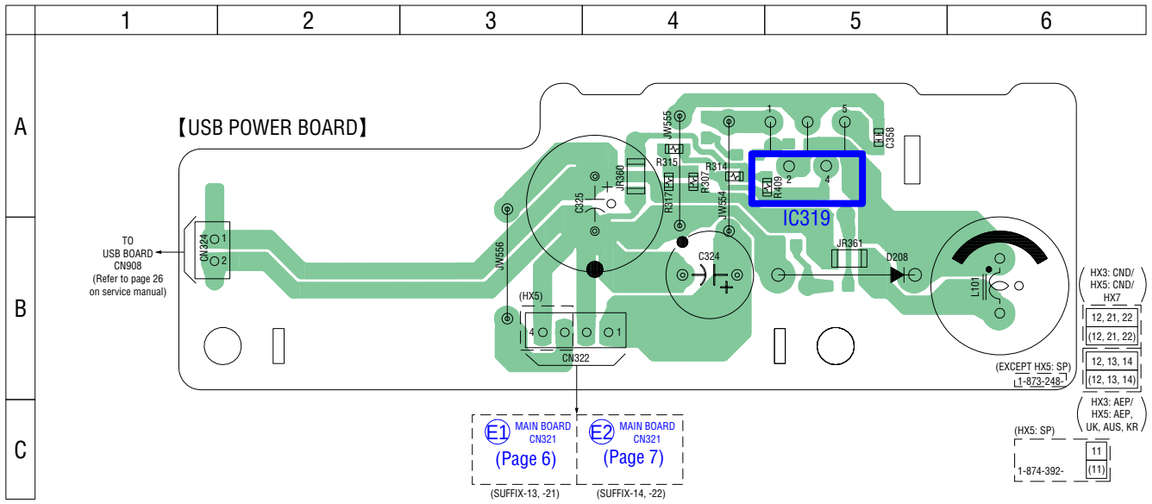


Note on Schematic Diagram:
- All capacitors are in µF unless noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

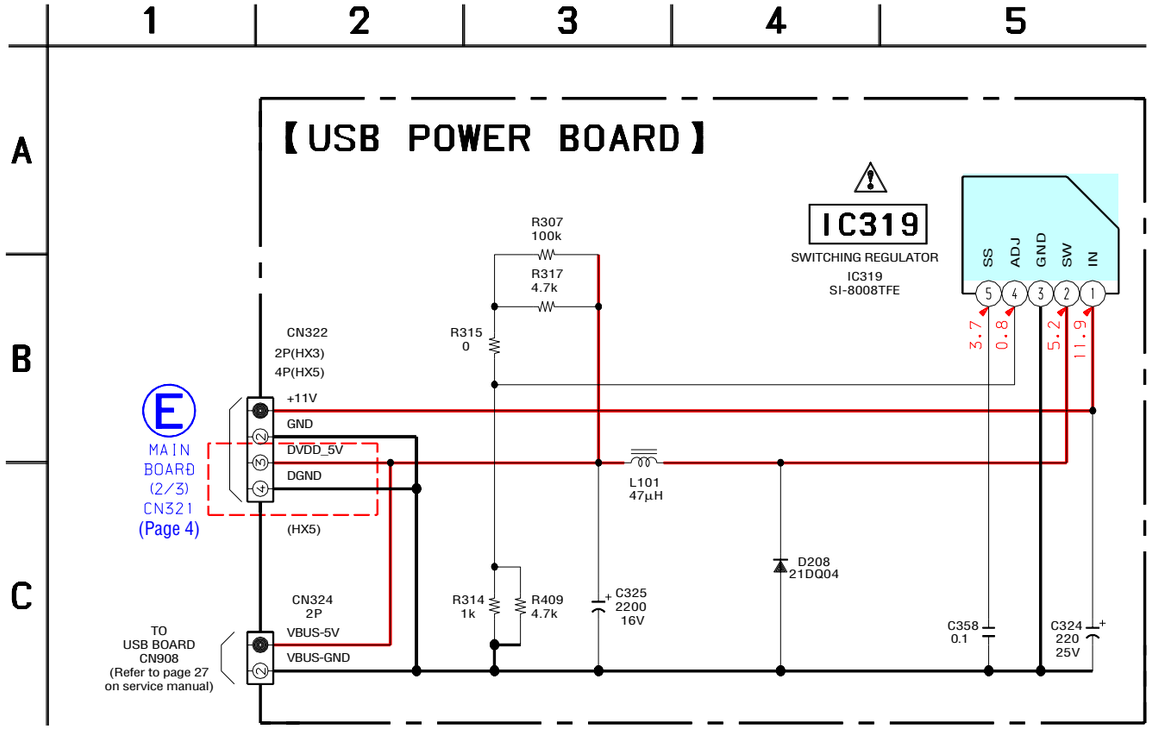
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  – USB POWER Board –
  no mark : USB
  – Other Boards –
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  [ ] : USB
  { } : BLUETOOTH
  ⟨⟨ ⟩⟩ : XM
  < > : SIRIUS
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : AUDIO
  ➡ : TUNER (FM/AM)
  ⇨ : CD PLAY
  ⇨ : USB
  ➡ : XM
  ➡ : SIRIUS
  ⇨ : AUDIO IN
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  KR : Korean model
  SP : Singapore model

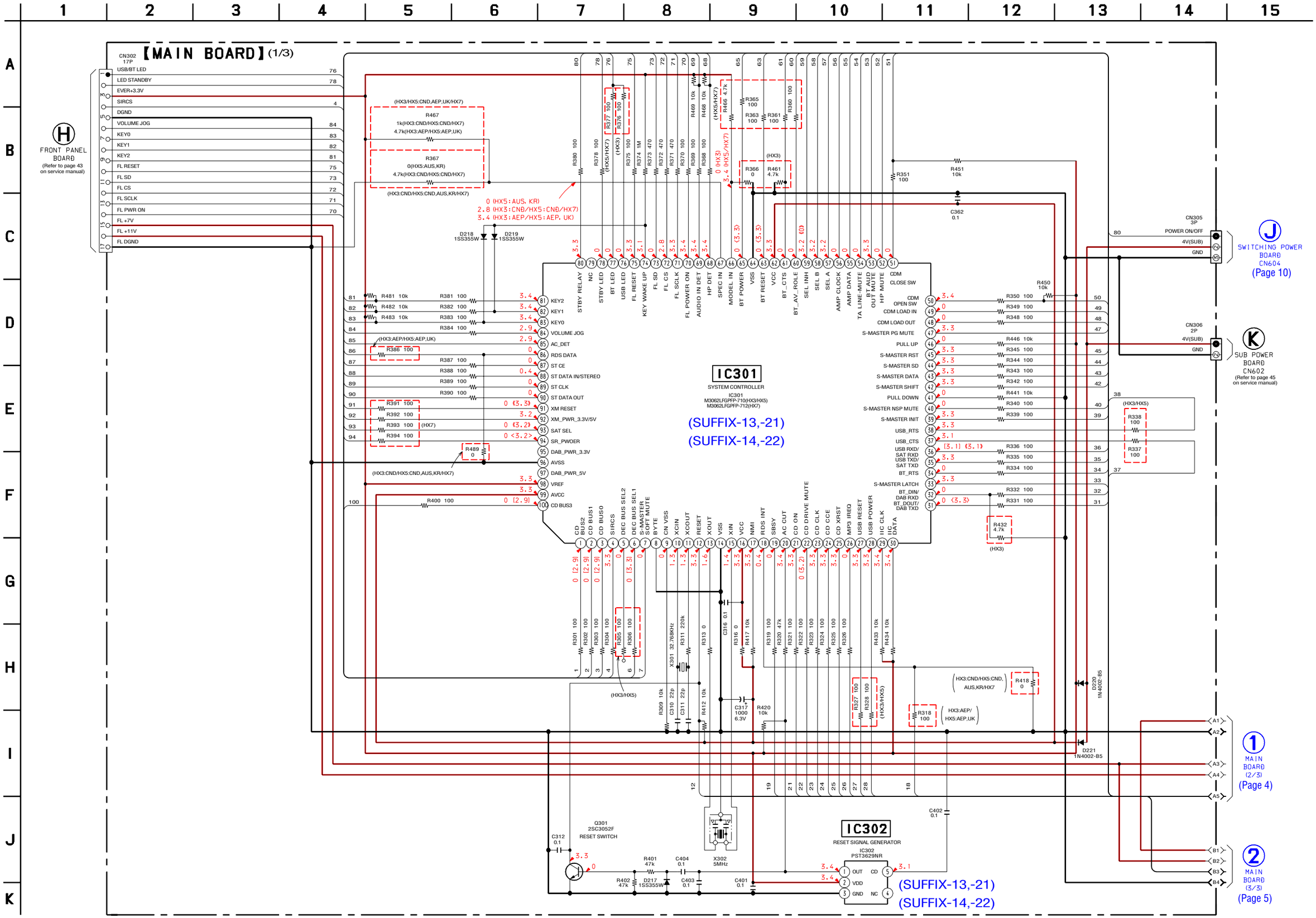
2-1. PRINTED WIRING BOARD – USB POWER Board (HX3/HX5) – :Uses unleaded solder.



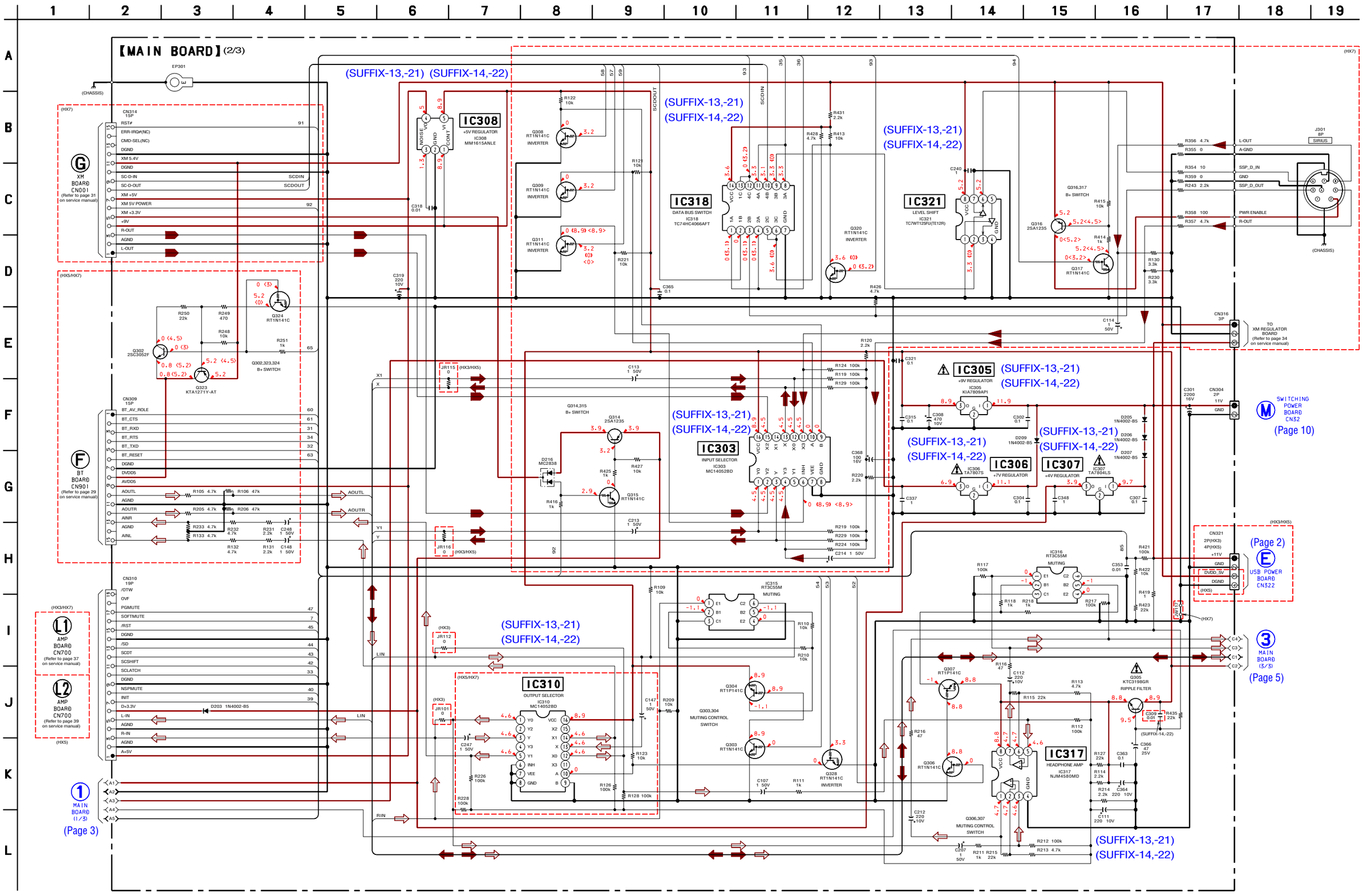
2-2. SCHEMATIC DIAGRAM – USB POWER Board (HX3/HX5) –



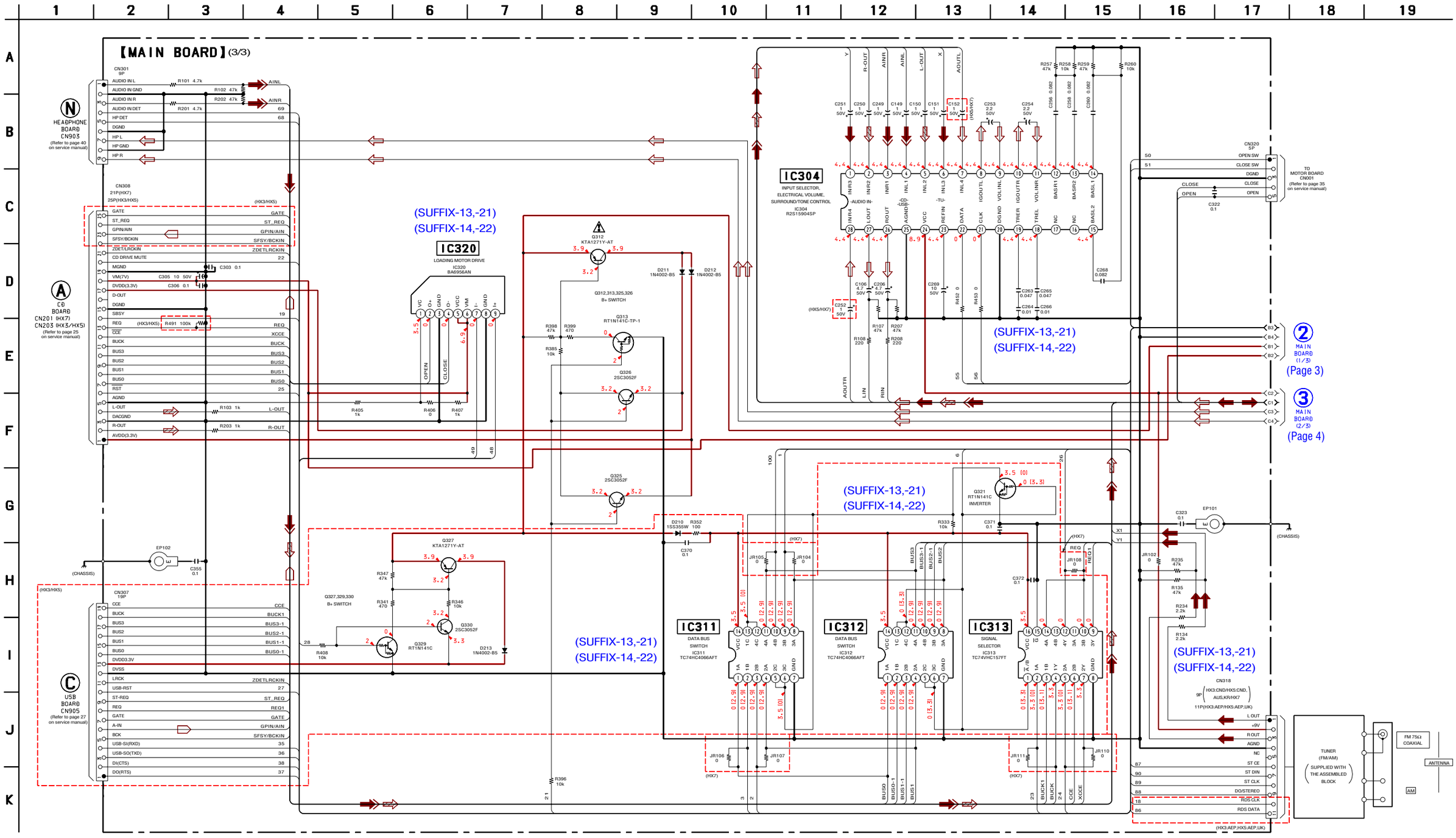
2-3. SCHEMATIC DIAGRAM – MAIN Board (1/3) –



2-4. SCHEMATIC DIAGRAM – MAIN Board (2/3) –



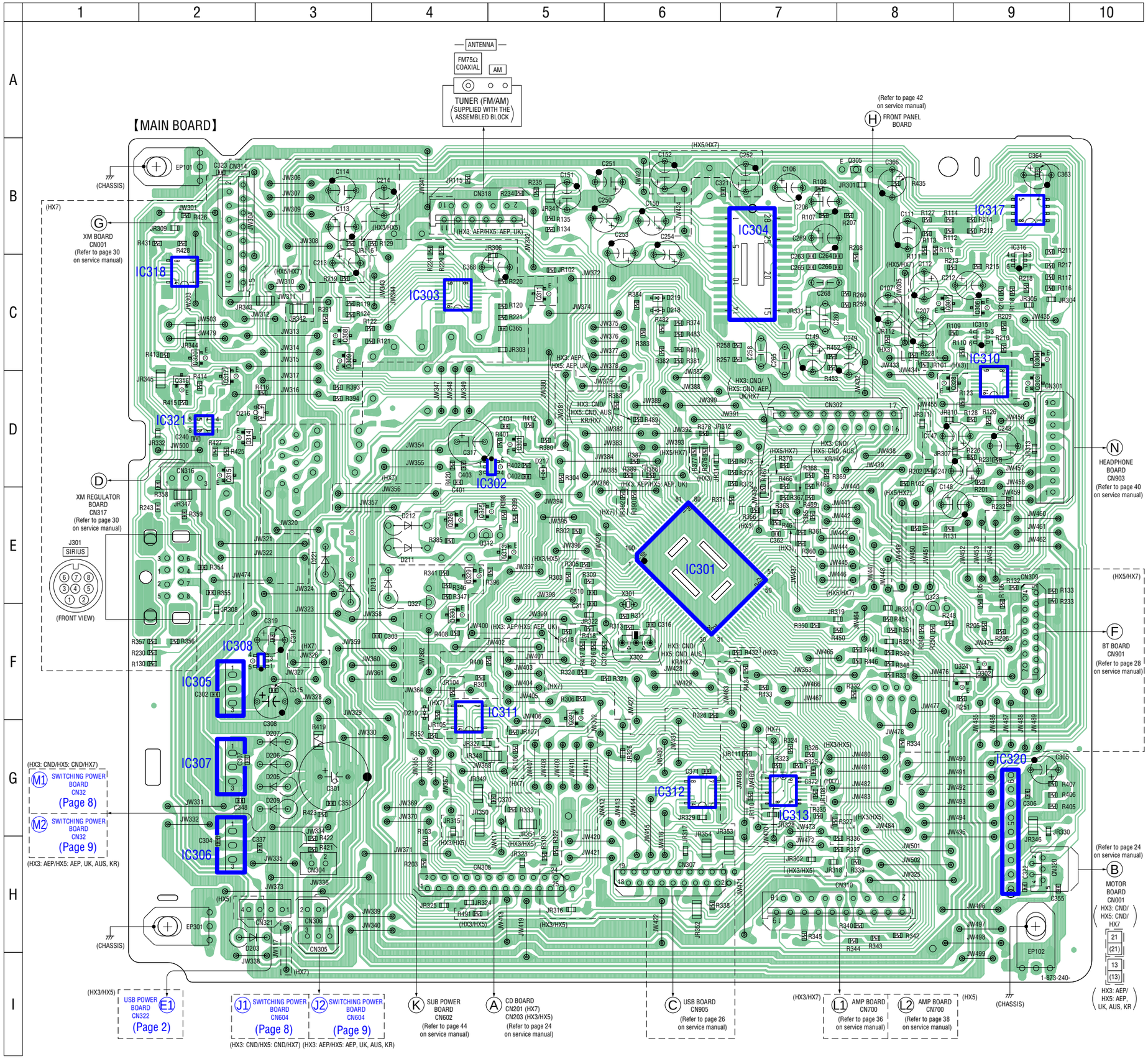
2-5. SCHEMATIC DIAGRAM – MAIN Board (3/3) –



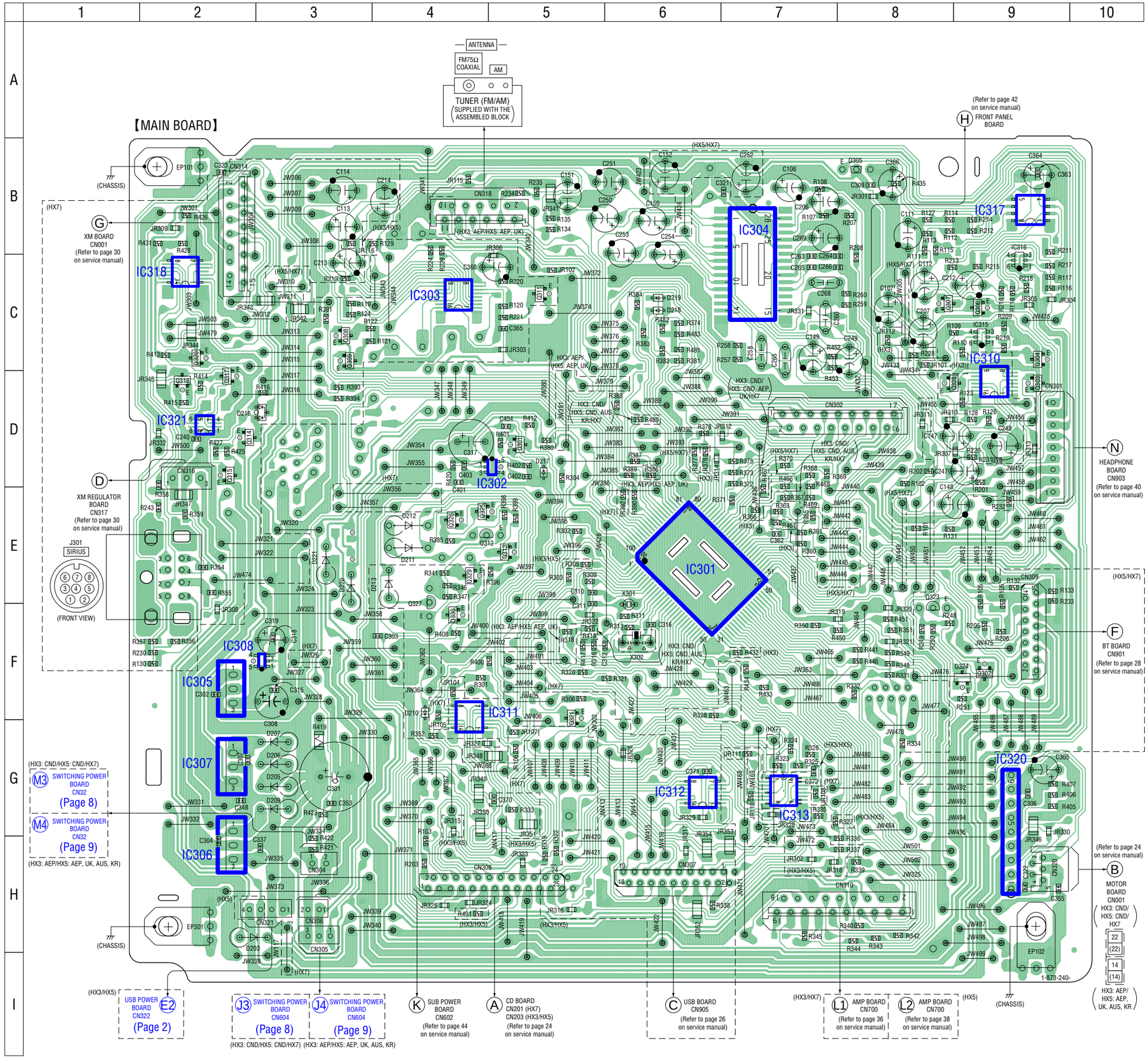
2-6. PRINTED WIRING BOARD – MAIN Board (Suffix-13, -21) – :Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D203	H-2
D205	G-3
D206	G-3
D207	G-3
D209	G-3
D210	F-4
D211	E-4
D212	E-4
D213	E-4
D216	D-3
D217	D-5
D218	C-6
D219	C-6
D220	E-3
D221	E-3
IC301	E-6
IC302	D-5
IC303	C-4
IC304	C-7
IC305	F-2
IC306	H-2
IC307	G-2
IC308	F-3
IC310	D-9
IC311	F-4
IC312	G-6
IC313	G-7
IC315	C-9
IC316	C-9
IC317	B-9
IC318	C-2
IC320	G-9
IC321	D-2
Q301	D-5
Q302	F-9
Q303	D-9
Q304	C-9
Q305	B-8
Q306	C-9
Q307	C-8
Q308	C-3
Q309	C-3
Q311	C-5
Q312	E-4
Q313	E-5
Q314	D-2
Q315	D-2
Q316	D-2
Q317	D-2
Q320	C-2
Q321	F-5
Q323	F-8
Q324	F-9
Q325	E-4
Q326	E-4
Q327	E-4
Q328	D-9
Q329	E-4
Q330	F-4



2-7. PRINTED WIRING BOARD – MAIN Board (Suffix-14, -22) – :Uses unleaded solder.



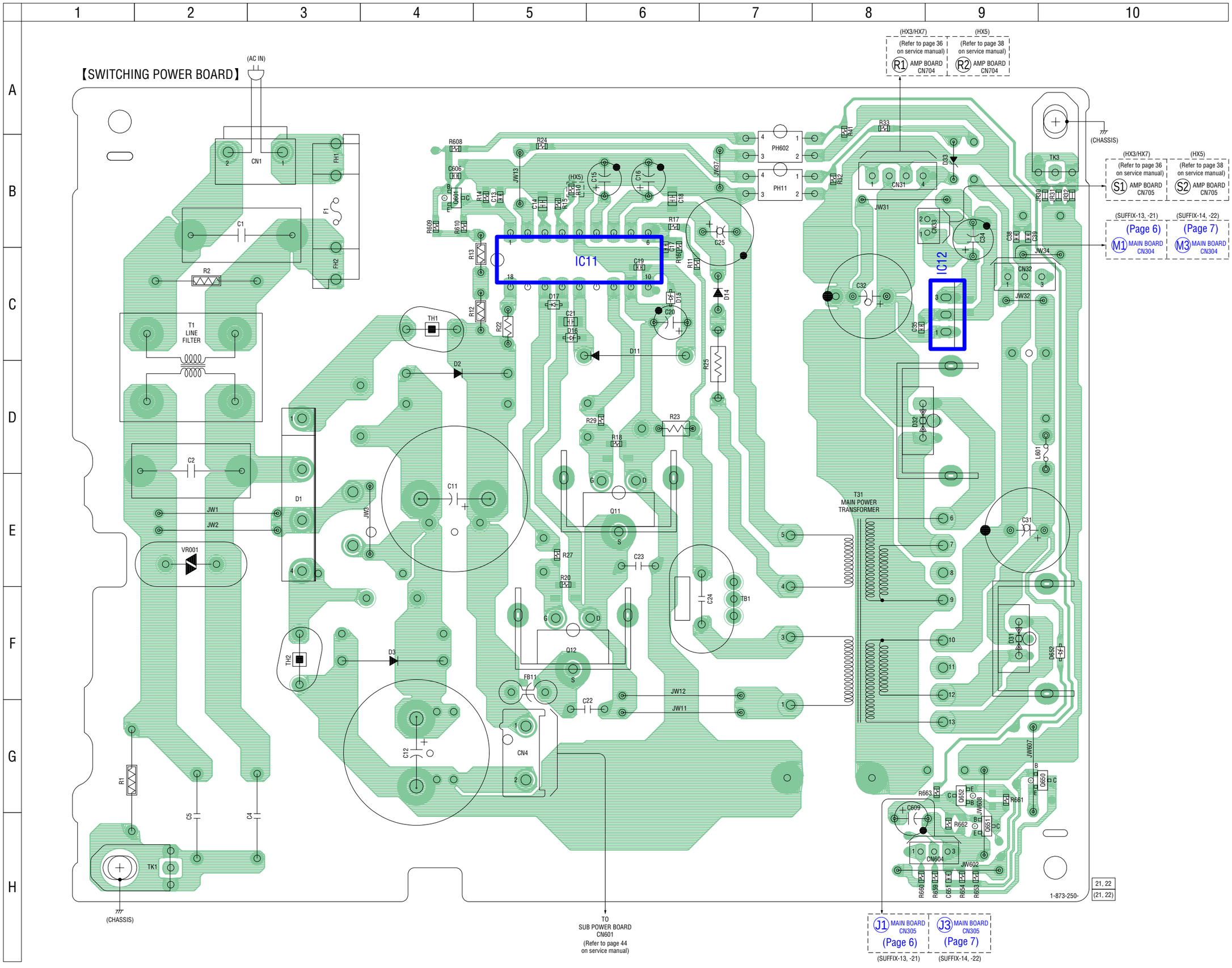
- **Semiconductor Location**

Ref. No.	Location
D203	H-2
D205	G-3
D206	G-3
D207	G-3
D209	G-3
D210	F-4
D211	E-4
D212	E-4
D213	E-4
D216	D-3
D217	D-5
D218	C-6
D219	C-6
D220	E-3
D221	E-3
IC301	E-6
IC302	D-5
IC303	C-4
IC304	C-7
IC305	F-2
IC306	H-2
IC307	G-2
IC308	F-3
IC310	D-9
IC311	F-4
IC312	G-6
IC313	G-7
IC315	C-9
IC316	C-9
IC317	B-9
IC318	C-2
IC320	G-9
IC321	D-2
Q301	D-5
Q302	F-9
Q303	D-9
Q304	C-9
Q305	B-8
Q306	C-9
Q307	C-8
Q308	C-3
Q309	C-3
Q311	C-5
Q312	E-4
Q313	E-5
Q314	D-2
Q315	D-2
Q316	D-2
Q317	D-2
Q320	C-2
Q321	F-5
Q323	F-8
Q324	F-9
Q325	E-4
Q326	E-4
Q327	E-4
Q328	D-9
Q329	E-4
Q330	F-4

2-8. PRINTED WIRING BOARD – SWITCHING POWER BOARD (HX3: Canadian/HX5: Canadian/HX7) (Suffix-21, -22) – :Uses unleaded solder.

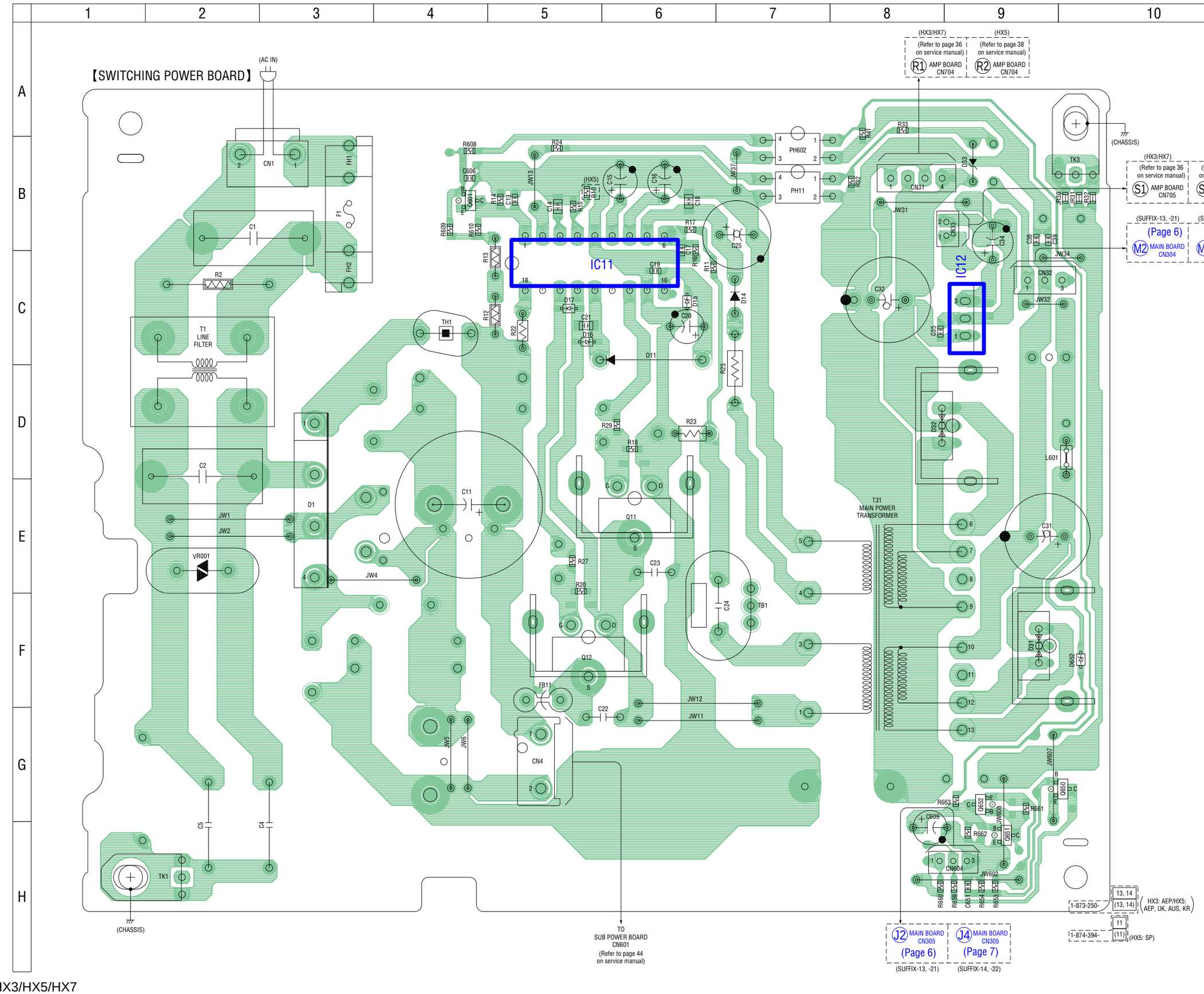
- **Semiconductor Location**

Ref. No.	Location
D1	E-3
D2	D-4
D3	F-4
D11	C-6
D14	C-7
D15	C-6
D16	C-5
D17	C-5
D31	F-9
D32	D-8
D33	B-9
IC11	C-5
IC12	C-9
PH11	B-7
Q11	E-6
Q12	F-5



2-9. PRINTED WIRING BOARD – SWITCHING POWER BOARD (HX3: AEP/HX5: AEP, UK, Australian, Singapore, Korean) (Suffix-13, -14) –

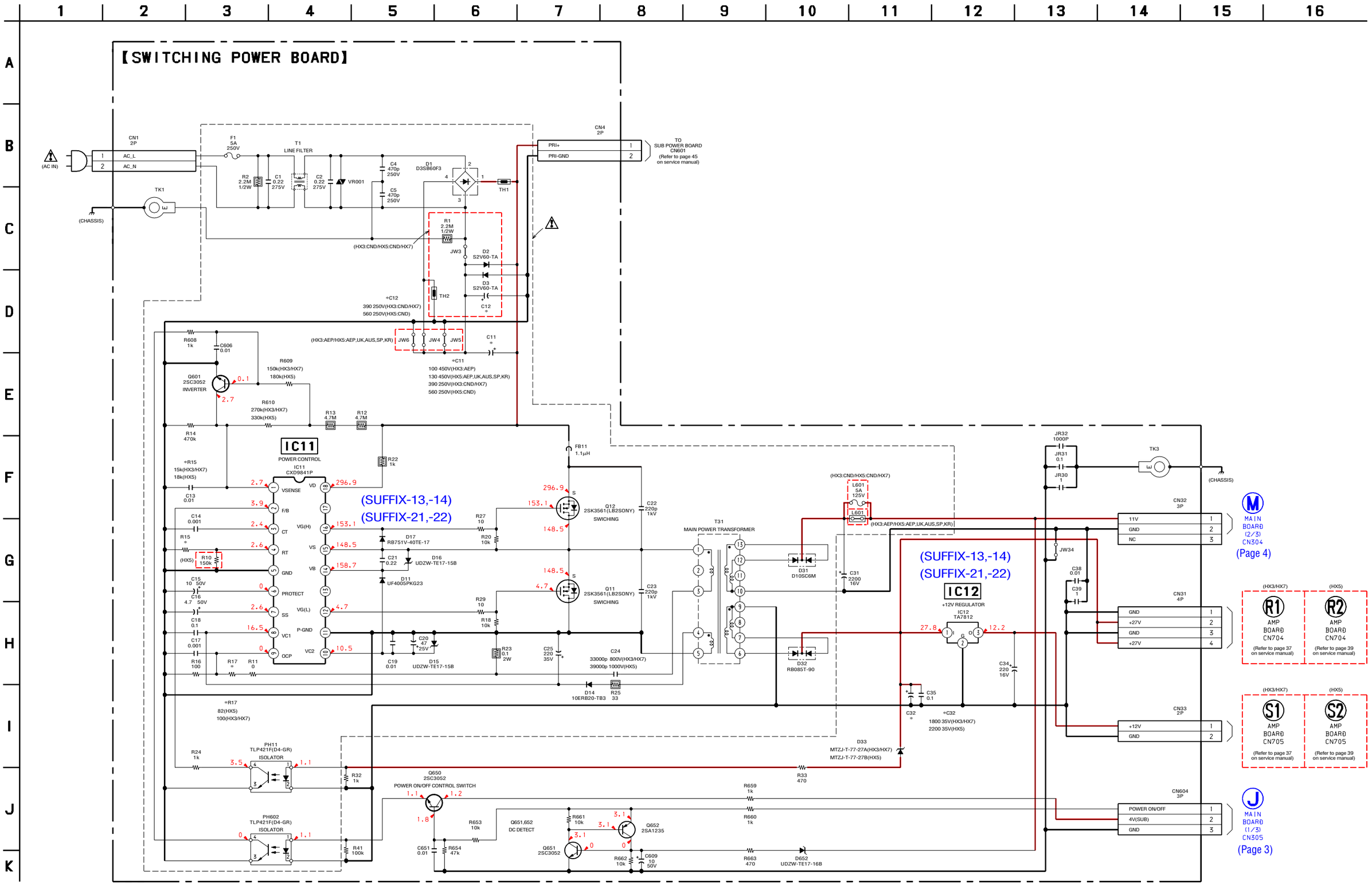
:Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location
D1	E-3
D11	C-6
D14	C-7
D15	C-6
D16	C-5
D17	C-5
D31	F-9
D32	D-8
D33	B-9
IC11	C-5
IC12	C-9
PH11	B-7
Q11	E-6
Q12	F-5

2-10. SCHEMATIC DIAGRAM – SWITCHING POWER Board –



3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  KR : Korean model
  SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-1243-007-A	MAIN BOARD, COMPLETE (HX7)			
	A-1243-275-A	MAIN BOARD, COMPLETE (HX3: AEP)			
	A-1243-703-A	MAIN BOARD, COMPLETE (HX3: CND)			
	A-1243-761-A	MAIN BOARD, COMPLETE (HX5: CND)			
	A-1244-270-A	MAIN BOARD, COMPLETE (HX5: AEP, UK)			
	A-1244-417-A	MAIN BOARD, COMPLETE (HX5: AUS, KR)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C106	1-126-963-11	ELECT	4.7uF	20%	50V
C107	1-126-960-11	ELECT	1uF	20%	50V
C111	1-126-923-91	ELECT	220uF	20%	10V
C112	1-126-923-91	ELECT	220uF	20%	10V
C113	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C114	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C147	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C148	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C149	1-126-960-11	ELECT	1uF	20%	50V
C150	1-126-960-11	ELECT	1uF	20%	50V
C151	1-126-960-11	ELECT	1uF	20%	50V
C152	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C206	1-126-963-11	ELECT	4.7uF	20%	50V
C207	1-126-960-11	ELECT	1uF	20%	50V
C212	1-126-923-91	ELECT	220uF	20%	10V
C213	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C214	1-126-960-11	ELECT	1uF	20%	50V (HX7)
C240	1-115-156-11	CERAMIC CHIP	1uF		10V (HX7)
C247	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C248	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)
C249	1-126-960-11	ELECT	1uF	20%	50V
C250	1-126-960-11	ELECT	1uF	20%	50V
C251	1-126-960-11	ELECT	1uF	20%	50V
C252	1-126-960-11	ELECT	1uF	20%	50V (HX5/HX7)

Ref. No.	Part No.	Description			Remark
C253	1-126-961-11	ELECT	2.2uF	20%	50V
C254	1-126-961-11	ELECT	2.2uF	20%	50V
C256	1-130-494-11	MYLAR	0.082uF	5%	50V
C258	1-130-494-11	MYLAR	0.082uF	5%	50V
C260	1-130-494-11	MYLAR	0.082uF	5%	50V
C263	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C264	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C265	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C266	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C268	1-130-494-11	MYLAR	0.082uF	5%	50V
C269	1-126-964-11	ELECT	10uF	20%	50V
C301	1-126-768-11	ELECT	2200uF	20%	16V
C302	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C305	1-124-261-00	ELECT	10uF	20%	50V
C306	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-126-925-91	ELECT	470uF	20%	10V
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SUFFIX-14, -22)
C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C317	1-126-916-11	ELECT	1000uF	20%	6.3V
C318	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C319	1-126-923-91	ELECT	220uF	20%	10V
C321	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C323	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C337	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C348	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C353	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C355	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C362	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C363	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C364	1-126-923-91	ELECT	220uF	20%	10V
C365	1-164-156-11	CERAMIC CHIP	0.1uF		25V (HX7)
C366	1-126-947-11	ELECT	47uF	20%	35V
C368	1-126-933-11	ELECT	100uF	20%	16V (HX7)

MAIN

Ref. No.	Part No.	Description	Remark
C370	1-164-156-11	CERAMIC CHIP 0.1uF 25V	(HX3/HX5)
C371	1-164-156-11	CERAMIC CHIP 0.1uF 25V	(HX3/HX5)
C372	1-164-156-11	CERAMIC CHIP 0.1uF 25V	(HX3/HX5)
C401	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C402	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C403	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C404	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
		< CONNECTOR >	
CN301	1-815-450-11	PIN, CONNECTOR (PWB) 9P	
CN302	1-784-778-11	CONNECTOR, FFC 17P	
CN304	1-819-130-11	PIN, CONNECTOR 2P	
CN305	1-815-444-11	PIN, CONNECTOR (PWB) 3P	
CN306	1-815-443-11	PIN, CONNECTOR (PWB) 2P	
CN307	1-779-287-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P	(HX3/HX5)
CN308	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P (HX7)	
CN308	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF)) 25P	(HX3/HX5)
CN309	1-779-283-11	CONNECTOR, FFC (LIF (NON-ZIF)) 15P	(HX5/HX7)
CN310	1-784-780-11	CONNECTOR, FFC 19P	
CN314	1-784-776-11	CONNECTOR, FFC 15P (HX7)	
CN316	1-819-131-11	PIN, CONNECTOR 3P (HX7)	
CN318	1-568-828-11	CONNECTOR, FFC 9P (HX3: CND/HX5: CND, AUS, KR/HX7)	
CN318	1-568-830-11	CONNECTOR, FFC 11P(HX3: AEP/HX5: AEP, UK)	
CN320	1-779-542-21	CONNECTOR, FFC (LIF (NON-ZIF)) 5P	
CN321	1-815-443-11	PIN, CONNECTOR (PWB) 2P (HX3)	
CN321	1-815-445-11	PIN, CONNECTOR (PWB) 4P (HX5)	
		< DIODE >	
D203	6-501-582-01	DIODE 1N4002-B5	
D205	6-501-582-01	DIODE 1N4002-B5	
D206	6-501-582-01	DIODE 1N4002-B5	
D207	6-501-582-01	DIODE 1N4002-B5	
D209	6-501-582-01	DIODE 1N4002-B5	
D210	6-501-193-01	DIODE 1SS355WTE-17 (HX3/HX5)	
D211	6-501-582-01	DIODE 1N4002-B5	
D212	6-501-582-01	DIODE 1N4002-B5	
D213	6-501-582-01	DIODE 1N4002-B5 (HX3/HX5)	
D216	6-500-335-01	DIODE MC2838-T112-1 (HX7)	
D217	6-501-193-01	DIODE 1SS355WTE-17	
D218	6-501-193-01	DIODE 1SS355WTE-17	
D219	6-501-193-01	DIODE 1SS355WTE-17	
D220	6-501-582-01	DIODE 1N4002-B5	
D221	6-501-582-01	DIODE 1N4002-B5	
		< EARTH TERMINAL >	
EP101	1-537-771-21	TERMINAL BOARD, GROUND	
EP102	1-537-771-21	TERMINAL BOARD, GROUND	
EP301	1-537-771-21	TERMINAL BOARD, GROUND	

Ref. No.	Part No.	Description	Remark
		< IC/TRANSISTOR >	
IC301	6-807-529-01	IC M3062LFGPFP-712 (for SERVICE) (HX7)	
IC301	6-807-530-01	IC M3062LFGPFP-710 (for SERVICE)	(HX3/HX5)
IC302	6-701-680-01	IC PST3629NR	
IC303	8-759-430-37	IC MC14052BDTR2 (HX7)	
IC304	6-710-289-01	IC R2S15904SP	
⚠IC305	6-700-830-01	IC KIA7809API	
⚠IC306	8-759-071-48	IC TA7807S	
⚠IC307	6-703-546-01	IC TA7804LS	
IC308	6-707-282-01	IC MM1615ANLE	
IC310	8-759-430-37	IC MC14052BDTR2 (HX5/HX7)	
IC311	8-759-523-03	IC TC74HC4066AFT (EL) (HX3/HX5)	
IC312	8-759-523-03	IC TC74HC4066AFT (EL) (HX3/HX5)	
IC313	6-707-870-01	IC TC74VHC157FT (EKJ) (HX3/HX5)	
IC315	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC316	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC317	8-759-656-83	IC NJM4580MD- (TE2)	
IC318	8-759-523-03	IC TC74HC4066AFT (EL) (HX7)	
IC320	8-759-598-69	IC BA6956AN	
IC321	8-759-679-36	IC TC7WT125FU (TE12R) (HX7)	
		< SOCKET >	
J301	1-821-210-11	SOCKET, DIN 8P (SIRIUS) (HX7)	
		< JUMPER RESISTOR >	
JR101	1-216-864-11	SHORT CHIP 0 (HX3)	
JR102	1-216-864-11	SHORT CHIP 0	
JR104	1-216-864-11	SHORT CHIP 0 (HX7)	
JR105	1-216-864-11	SHORT CHIP 0 (HX7)	
JR106	1-216-864-11	SHORT CHIP 0 (HX7)	
JR107	1-216-864-11	SHORT CHIP 0 (HX7)	
JR108	1-216-864-11	SHORT CHIP 0 (HX7)	
JR110	1-216-864-11	SHORT CHIP 0 (HX7)	
JR111	1-216-864-11	SHORT CHIP 0 (HX7)	
JR112	1-216-864-11	SHORT CHIP 0 (HX3)	
JR115	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR116	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR301	1-216-864-11	SHORT CHIP 0	
JR302	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR303	1-216-864-11	SHORT CHIP 0 (HX7)	
JR304	1-216-864-11	SHORT CHIP 0	
JR305	1-216-864-11	SHORT CHIP 0	
JR306	1-216-864-11	SHORT CHIP 0 (HX7)	
JR307	1-216-864-11	SHORT CHIP 0 (HX5/HX7)	
JR308	1-216-864-11	SHORT CHIP 0 (HX7)	
JR309	1-216-864-11	SHORT CHIP 0 (HX7)	
JR310	1-216-864-11	SHORT CHIP 0 (HX5/HX7)	
JR311	1-216-864-11	SHORT CHIP 0	
JR312	1-216-864-11	SHORT CHIP 0	
JR313	1-216-864-11	SHORT CHIP 0	
JR314	1-216-864-11	SHORT CHIP 0	
JR315	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR316	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR317	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR318	1-216-864-11	SHORT CHIP 0 (HX3/HX5)	
JR319	1-216-864-11	SHORT CHIP 0	

Ref. No.	Part No.	Description		Remark
JR320	1-216-864-11	SHORT CHIP	0	
JR321	1-216-864-11	SHORT CHIP	0	
JR322	1-216-864-11	SHORT CHIP	0	
JR323	1-216-864-11	SHORT CHIP	0	
JR324	1-216-864-11	SHORT CHIP	0	
JR325	1-216-864-11	SHORT CHIP	0	
JR326	1-216-864-11	SHORT CHIP	0 (HX3/HX5)	
JR327	1-216-864-11	SHORT CHIP	0	
JR328	1-216-864-11	SHORT CHIP	0	
JR329	1-216-864-11	SHORT CHIP	0 (HX3/HX5)	
JR330	1-216-864-11	SHORT CHIP	0	
JR331	1-216-864-11	SHORT CHIP	0	
JR332	1-216-864-11	SHORT CHIP	0 (HX7)	
JR341	1-216-296-11	SHORT CHIP	0	
JR342	1-216-296-11	SHORT CHIP	0	
JR343	1-216-296-11	SHORT CHIP	0 (HX7)	
JR344	1-216-296-11	SHORT CHIP	0 (HX7)	
JR345	1-216-296-11	SHORT CHIP	0 (HX7)	
JR346	1-216-296-11	SHORT CHIP	0	
JR347	1-216-296-11	SHORT CHIP	0 (HX7)	
JR348	1-216-296-11	SHORT CHIP	0 (HX3/HX5)	
JR349	1-216-296-11	SHORT CHIP	0	
JR350	1-216-296-11	SHORT CHIP	0	
JR351	1-216-296-11	SHORT CHIP	0 (HX3/HX5)	
JR352	1-216-296-11	SHORT CHIP	0 (HX3/HX5)	
JR353	1-216-296-11	SHORT CHIP	0 (HX3/HX5)	
JR354	1-216-296-11	SHORT CHIP	0 (HX3/HX5)	
		< TRANSISTOR >		
Q301	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (HX5/HX7)	
Q303	8-729-027-43	TRANSISTOR	DTC114EKA-T146	
Q304	8-729-027-23	TRANSISTOR	DTA114EKA-T146	
⚠ Q305	8-729-036-89	TRANSISTOR	KTC3198GR-AT	
Q306	8-729-027-43	TRANSISTOR	DTC114EKA-T146	
Q307	8-729-027-23	TRANSISTOR	DTA114EKA-T146	
Q308	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
Q309	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
Q311	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
⚠ Q312	8-729-037-13	TRANSISTOR	KTA1271Y	
Q313	8-729-027-43	TRANSISTOR	DTC114EKA-T146	
Q314	8-729-600-22	TRANSISTOR	2SA1235-F (HX7)	
Q315	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
Q316	8-729-600-22	TRANSISTOR	2SA1235-F (HX7)	
Q317	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
Q320	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX7)	
Q321	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX3/HX5)	
Q323	8-729-037-13	TRANSISTOR	KTA1271Y (HX5/HX7)	
Q324	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX5/HX7)	
Q325	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q326	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q327	8-729-037-13	TRANSISTOR	KTA1271Y (HX3/HX5)	
Q328	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX5/HX7)	
Q329	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (HX3/HX5)	
Q330	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (HX3/HX5)	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R102	1-216-841-11	METAL CHIP	47K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R105	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R106	1-216-841-11	METAL CHIP	47K	5%	1/10W (HX5/HX7)
R107	1-216-841-11	METAL CHIP	47K	5%	1/10W
R108	1-216-813-11	METAL CHIP	220	5%	1/10W
R109	1-216-833-11	METAL CHIP	10K	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-845-11	METAL CHIP	100K	5%	1/10W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R115	1-216-837-11	METAL CHIP	22K	5%	1/10W
R116	1-216-805-11	METAL CHIP	47	5%	1/10W
R117	1-216-845-11	METAL CHIP	100K	5%	1/10W
R118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R119	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R120	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX5/HX7)
R124	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R126	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R127	1-216-837-11	METAL CHIP	22K	5%	1/10W
R128	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R129	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R130	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (HX7)
R131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX5/HX7)
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R135	1-216-841-11	METAL CHIP	47K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-841-11	METAL CHIP	47K	5%	1/10W
R203	1-216-821-11	METAL CHIP	1K	5%	1/10W
R205	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R206	1-216-841-11	METAL CHIP	47K	5%	1/10W (HX5/HX7)
R207	1-216-841-11	METAL CHIP	47K	5%	1/10W
R208	1-216-813-11	METAL CHIP	220	5%	1/10W
R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R212	1-216-845-11	METAL CHIP	100K	5%	1/10W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R215	1-216-837-11	METAL CHIP	22K	5%	1/10W
R216	1-216-805-11	METAL CHIP	47	5%	1/10W
R217	1-216-845-11	METAL CHIP	100K	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R219	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R220	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R221	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX7)
R224	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R226	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R228	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX5/HX7)
R229	1-216-845-11	METAL CHIP	100K	5%	1/10W (HX7)
R230	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (HX7)
R231	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX5/HX7)
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R233	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX5/HX7)
R234	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R235	1-216-841-11	METAL CHIP	47K	5%	1/10W
R243	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (HX7)
R248	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX5/HX7)
R249	1-216-817-11	METAL CHIP	470	5%	1/10W (HX5/HX7)
R250	1-216-837-11	METAL CHIP	22K	5%	1/10W (HX5/HX7)
R251	1-216-821-11	METAL CHIP	1K	5%	1/10W (HX5/HX7)
R257	1-216-841-11	METAL CHIP	47K	5%	1/10W
R258	1-216-833-11	METAL CHIP	10K	5%	1/10W
R259	1-216-841-11	METAL CHIP	47K	5%	1/10W
R260	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-809-11	METAL CHIP	100	5%	1/10W
R304	1-216-809-11	METAL CHIP	100	5%	1/10W
R305	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R306	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W
R311	1-216-849-11	METAL CHIP	220K	5%	1/10W
R313	1-216-864-11	SHORT CHIP	0		
R316	1-216-864-11	SHORT CHIP	0		
R318	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3: AEP/HX5: AEP, UK)
R319	1-216-809-11	METAL CHIP	100	5%	1/10W
R320	1-216-841-11	METAL CHIP	47K	5%	1/10W
R321	1-216-809-11	METAL CHIP	100	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-809-11	METAL CHIP	100	5%	1/10W
R326	1-216-809-11	METAL CHIP	100	5%	1/10W
R327	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R328	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R331	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-809-11	METAL CHIP	100	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX3/HX5)
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-809-11	METAL CHIP	100	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R338	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R341	1-216-817-11	METAL CHIP	470	5%	1/10W (HX3/HX5)
R342	1-216-809-11	METAL CHIP	100	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-809-11	METAL CHIP	100	5%	1/10W
R346	1-216-833-11	METAL CHIP	10K	5%	1/10W (HX3/HX5)
R347	1-216-841-11	METAL CHIP	47K	5%	1/10W (HX3/HX5)
R348	1-216-809-11	METAL CHIP	100	5%	1/10W
R349	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W (HX3/HX5)
R354	1-216-797-11	METAL CHIP	10	5%	1/10W (HX7)
R355	1-216-864-11	SHORT CHIP	0 (HX7)		
R356	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R357	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (HX7)
R358	1-216-809-11	METAL CHIP	100	5%	1/10W (HX7)
R359	1-216-864-11	SHORT CHIP	0 (HX7)		
R360	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R361	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R363	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R365	1-216-809-11	METAL CHIP	100	5%	1/10W (HX5/HX7)
R366	1-216-864-11	SHORT CHIP	0 (HX3)		

Ref. No.	Part No.	Description			Remark
R367	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
			(HX3: CND/HX5: CND/HX7)		
R367	1-216-864-11	SHORT CHIP	0 (HX5: AUS, KR)		
R368	1-216-809-11	METAL CHIP	100	5%	1/10W
R369	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R370	1-216-809-11	METAL CHIP	100	5%	1/10W
R371	1-216-817-11	METAL CHIP	470	5%	1/10W
R372	1-216-817-11	METAL CHIP	470	5%	1/10W
					(HX7)
R373	1-216-817-11	METAL CHIP	470	5%	1/10W
R374	1-216-857-11	METAL CHIP	1M	5%	1/10W
					(HX7)
R375	1-216-809-11	METAL CHIP	100	5%	1/10W
R376	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX3)
R377	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX5/HX7)
R378	1-216-809-11	METAL CHIP	100	5%	1/10W
R380	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R381	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R385	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R386	1-216-809-11	METAL CHIP	100	5%	1/10W
			(HX3: AEP/HX5: AEP, UK)		
R387	1-216-809-11	METAL CHIP	100	5%	1/10W
R388	1-216-809-11	METAL CHIP	100	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R391	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R392	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R393	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R394	1-216-809-11	METAL CHIP	100	5%	1/10W
					(HX7)
R396	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R398	1-216-841-11	METAL CHIP	47K	5%	1/10W
R399	1-216-817-11	METAL CHIP	470	5%	1/10W
R400	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-841-11	METAL CHIP	47K	5%	1/10W
R402	1-216-841-11	METAL CHIP	47K	5%	1/10W
					(HX7)
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX3/HX5)
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R413	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R414	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(HX7)
R415	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R416	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(HX7)
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R418	1-216-864-11	SHORT CHIP	0		
			(HX3: CND/HX5: CND, AUS, KR/HX7)		
R419	1-217-806-11	RES-CHIP	1	5%	1/8W

Ref. No.	Part No.	Description			Remark
R420	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-845-11	METAL CHIP	100K	5%	1/10W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R423	1-216-837-11	METAL CHIP	22K	5%	1/10W
R425	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(HX7)
R426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX7)
R427	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R428	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX7)
					(HX7)
R431	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
					(HX7)
R432	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX3)
R433	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-833-11	METAL CHIP	10K	5%	1/10W
R435	1-216-837-11	METAL CHIP	22K	5%	1/10W
					(HX7)
R441	1-216-833-11	METAL CHIP	10K	5%	1/10W
R446	1-216-833-11	METAL CHIP	10K	5%	1/10W
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-833-11	METAL CHIP	10K	5%	1/10W
R452	1-216-864-11	SHORT CHIP	0		
					(HX7)
R453	1-216-864-11	SHORT CHIP	0		
R461	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX3)
R466	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(HX5/HX7)
R467	1-216-821-11	METAL CHIP	1K	5%	1/10W
				(HX3: CND/HX5: CND/HX7)	
R467	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
				(HX3: AEP/HX5: AEP, UK)	
R468	1-216-833-11	METAL CHIP	10K	5%	1/10W
R469	1-216-833-11	METAL CHIP	10K	5%	1/10W
R481	1-216-833-11	METAL CHIP	10K	5%	1/10W
R482	1-216-833-11	METAL CHIP	10K	5%	1/10W
R483	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(HX7)
R489	1-216-864-11	SHORT CHIP	0		
			(HX3: CND/HX5: CND, AUS, KR/HX7)		
R491	1-216-845-11	METAL CHIP	100K	5%	1/10W
					(HX3/HX5)
		< VIBRATOR >			
X301	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X302	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
**********					
	A-1243-020-A	SWITCHING POWER BOARD, COMPLETE			
					(HX3: CND/HX7)
	A-1243-203-A	SWITCHING POWER BOARD, COMPLETE			
					(HX5: AEP, UK, AUS, KR)
	A-1243-278-A	SWITCHING POWER BOARD, COMPLETE			
					(HX3: AEP)
	A-1243-762-A	SWITCHING POWER BOARD, COMPLETE			
					(HX5: CND)
	A-1309-208-A	SWITCHING POWER BOARD, COMPLETE			
					(HX5: SP)
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			

HCD-HX3/HX5/HX7

Ver. 1.2

SWITCHING POWER

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
⚠C1	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C2	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C4	1-112-876-51	CERAMIC	470PF	10%	250V (HX3: CND/HX5: CND/HX7)
⚠C4	1-119-886-51	CERAMIC	470PF	10%	250V (HX3: AEP/HX5: AEP, UK, AUS, SP, KR)
⚠C5	1-112-876-51	CERAMIC	470PF	10%	250V (HX3: CND/HX5: CND/HX7)
⚠C5	1-119-886-51	CERAMIC	470PF	10%	250V (HX3: AEP/HX5: AEP, UK, AUS, SP, KR)
⚠C11	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (HX3: CND/HX7)
⚠C11	1-100-923-21	ELECT	100uF	20%	450V (HX3: AEP)
⚠C11	1-114-237-21	ELECT	130uF	20%	450V (HX5: AEP, UK, AUS, SP, KR)
⚠C11	1-114-366-11	ELECT (BLOCK)	560uF	20%	250V (HX5: CND)
⚠C12	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (HX3: CND/HX7)
⚠C12	1-114-366-11	ELECT (BLOCK)	560uF	20%	250V (HX5: CND)
⚠C13	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C14	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
⚠C15	1-126-964-11	ELECT	10uF	20%	50V
⚠C16	1-126-963-11	ELECT	4.7uF	20%	50V
⚠C17	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
⚠C18	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
⚠C19	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C20	1-126-947-11	ELECT	47uF	20%	35V
⚠C21	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
⚠C22	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C23	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C24	1-100-400-11	FILM	39000PF	3%	1KV (HX5)
⚠C24	1-165-610-11	FILM	33000PF	3%	800V (HX3/HX7)
⚠C25	1-126-949-11	ELECT	220uF	20%	35V
C31	1-128-951-21	ELECT	2200uF	20%	16V
C32	1-100-924-21	ELECT	2200uF	20%	35V (HX5)
C32	1-137-806-21	ELECT	1800uF	20%	35V (HX3/HX7)
C34	1-126-934-11	ELECT	220uF	20%	16V
C35	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C39	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
⚠C606	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C609	1-126-964-11	ELECT	10uF	20%	50V
C651	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
		< CONNECTOR >			
CN1	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
CN31	1-819-132-11	PIN, CONNECTOR 4P			
CN33	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
		< DIODE >			
⚠D1	8-719-077-77	DIODE D3SB60F3			
⚠D2	8-719-081-58	DIODE S2V60-TA (HX3: CND/HX5: CND/HX7)			
⚠D3	8-719-081-58	DIODE S2V60-TA (HX3: CND/HX5: CND/HX7)			
⚠D11	8-719-979-64	DIODE UF4005/23			
⚠D14	6-500-567-31	DIODE 10ERB20-TB3			
⚠D15	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D16	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D17	8-719-060-48	DIODE RB751V-40TE-17			
⚠D31	8-719-510-09	DIODE D10SC6M			
⚠D32	6-501-518-01	DIODE RB085T-90			
D33	8-719-983-22	DIODE MTZJ-T-77-27A (HX3/HX7)			
D33	8-719-982-15	DIODE MTZJ-27B (HX5)			
D652	6-501-179-01	DIODE UDZW-TE17-16B			
		< FUSE >			
⚠F1	1-576-232-51	FUSE (H.B.C.) (5A/250V)			
		< FERRITE BEAD >			
⚠FB11	1-410-397-21	FERRITE 1.1uH			
		< FUSE HOLDER >			
FH1	1-533-233-31	FUSE HOLDER			
FH2	1-533-233-31	FUSE HOLDER			
		< IC >			
⚠IC11	6-707-749-01	IC CXD9841P			
⚠IC12	8-759-231-58	IC TA7812S			
		< CAPACITOR >			
JR30	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
JR31	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
JR32	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< FUSE/IC LINK >			
⚠L601	1-523-021-11	FUSE (5A/125V) (HX3: CND/HX5: CND/HX7)			
⚠L601	1-576-669-42	IC LINK (HX3: AEP/HX5: AEP, UK, AUS, SP, KR)			
		< PHOTO COUPLER >			
⚠PH11	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
⚠PH602	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
		< TRANSISTOR >			
⚠Q11	6-551-302-11	FET 2SK3561			
⚠Q12	6-551-302-11	FET 2SK3561			
⚠Q601	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF			
Q650	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF			
Q651	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF			
Q652	8-729-600-22	TRANSISTOR 2SA1235-F			
		< RESISTOR >			
⚠R1	1-219-512-11	METAL	2.2M	5%	1/2W F (HX3: CND/HX5: CND/HX7)
⚠R2	1-219-512-11	METAL	2.2M	5%	1/2W F
⚠R10	1-218-899-11	METAL CHIP	150K	0.5%	1/16W (HX5)
⚠R11	1-216-864-11	SHORT CHIP	0		
⚠R12	1-245-502-31	METAL	4.7M	2%	1/4W F

Ref. No.	Part No.	Description			Remark
⚠R13	1-245-502-31	METAL	4.7M	2%	1/4W F
⚠R14	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
⚠R15	1-218-875-11	METAL CHIP	15K	0.5%	1/10W (HX3/HX7)
⚠R15	1-218-877-11	METAL CHIP	18K	0.5%	1/10W (HX5)
⚠R16	1-218-823-11	METAL CHIP	100	0.5%	1/10W
⚠R17	1-211-991-11	METAL CHIP	82	0.5%	1/10W (HX5)
⚠R17	1-218-823-11	METAL CHIP	100	0.5%	1/10W (HX3/HX7)
⚠R18	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R20	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R22	1-249-417-11	CARBON	1K	5%	1/4W F
⚠R23	1-219-984-51	METAL	0.1	2%	2W F
⚠R24	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R25	1-247-694-11	CARBON	33	5%	1/4W F
⚠R27	1-216-797-11	METAL CHIP	10	5%	1/10W
⚠R29	1-216-797-11	METAL CHIP	10	5%	1/10W
R32	1-216-821-11	METAL CHIP	1K	5%	1/10W
R33	1-216-817-11	METAL CHIP	470	5%	1/10W
R41	1-216-845-11	METAL CHIP	100K	5%	1/10W
⚠R608	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R609	1-218-899-11	METAL CHIP	150K	0.5%	1/16W (HX3/HX7)
⚠R609	1-218-901-11	METAL CHIP	180K	0.5%	1/10W (HX5)
⚠R610	1-218-905-11	METAL CHIP	270K	0.5%	1/10W (HX3/HX7)
⚠R610	1-218-907-11	METAL CHIP	330K	0.5%	1/10W (HX5)
R653	1-216-833-11	METAL CHIP	10K	5%	1/10W
R654	1-216-841-11	METAL CHIP	47K	5%	1/10W
R659	1-216-821-11	METAL CHIP	1K	5%	1/10W
R660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R661	1-216-833-11	METAL CHIP	10K	5%	1/10W
R662	1-216-833-11	METAL CHIP	10K	5%	1/10W
R663	1-216-817-11	METAL CHIP	470	5%	1/10W
		< TRANSFORMER >			
⚠T1	1-445-048-21	TRANSFORMER, LINE FILTER (HX3: AEP)			
⚠T1	1-457-125-21	COIL, LINE FILTER (HX5: CND)			
⚠T1	1-457-326-21	COIL, LINE FILTER (HX3: CND/HX5: AEP, UK, AUS, SP, KR/HX7)			
⚠T31	1-445-162-11	TRANSFORMER, CONVERTER (HX5)			
⚠T31	1-445-163-11	TRANSFORMER, CONVERTER (HX3/HX7)			
		< THERMISTOR >			
⚠TH1	1-802-075-11	THERMISTOR, NTC (HX3: AEP/HX5: AEP, UK, AUS, SP, KR)			
⚠TH1	1-805-901-11	THERMISTOR, NTC (HX3: CND/HX5: CND/HX7)			
⚠TH2	1-805-901-11	THERMISTOR, NTC (HX3: CND/HX5: CND/HX7)			
		< EARH TERMINAL >			
* TK1	1-537-738-21	TERMINAL, EARTH			
* TK3	1-537-738-21	TERMINAL, EARTH			
		< VARISTOR >			
⚠VR001	1-805-481-21	VARISTOR (HX3: CND/HX5: CND/HX7)			
⚠VR001	1-805-482-11	VARISTOR (HX3: AEP/HX5: AEP, UK, AUS, SP, KR)			

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USB POWER BOARD (HX3/HX5)
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	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C324	1-128-952-31	ELECT	220uF	20%	25V
C325	1-128-951-21	ELECT	2200uF	20%	16V
C358	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D208	6-500-080-11	DIODE 21DQ04N-TA2B1			
		< IC >			
⚠IC319	6-710-940-01	IC SI-8008TFE			
		< JUMPER RESISTOR >			
JR360	1-216-296-11	SHORT CHIP	0		
JR361	1-216-296-11	SHORT CHIP	0		
		< COIL >			
L101	1-400-424-11	CHOKE, COIL	47uH		
		< RESISTOR >			
R307	1-216-845-11	METAL CHIP	100K	5%	1/10W
R314	1-216-821-11	METAL CHIP	1K	5%	1/10W
R315	1-216-864-11	SHORT CHIP	0		
R317	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R409	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

MEMO

HCD-HX3/HX5/HX7

SONY

SERVICE MANUAL

Ver. 1.2 2007.06

US Model
HCD-HX7
Canadian Model
AEP Model
E Model
HCD-HX3/HX5
UK Model
Australian Model
HCD-HX5

SUPPLEMENT-2

File this supplement with the service manual.

Subject: 1. Printed wiring board, schematic diagrams and electrical parts list of MAIN board (for Singapore model of HCD-HX5).
2. Addition of HCD-HX3 (E, Mexican, Chilean, Peruvian, Argentina and Russian models) for CMT-HX3R.

9-877-618-82
HCD-HX3/HX5/HX7

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1. PRINTED WIRING BOARD, SCHEMATIC DIAGRAMS AND ELECTRICAL PARTS LIST OF MAIN BOARD (for Singapore model of HCD-HX5)

1-1. DIAGRAMS

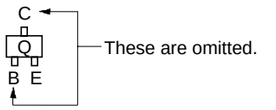
- **Note For Printed Wiring Boards and Schematic Diagrams**

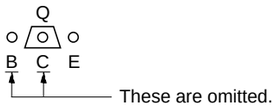
Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

- Indication of transistor





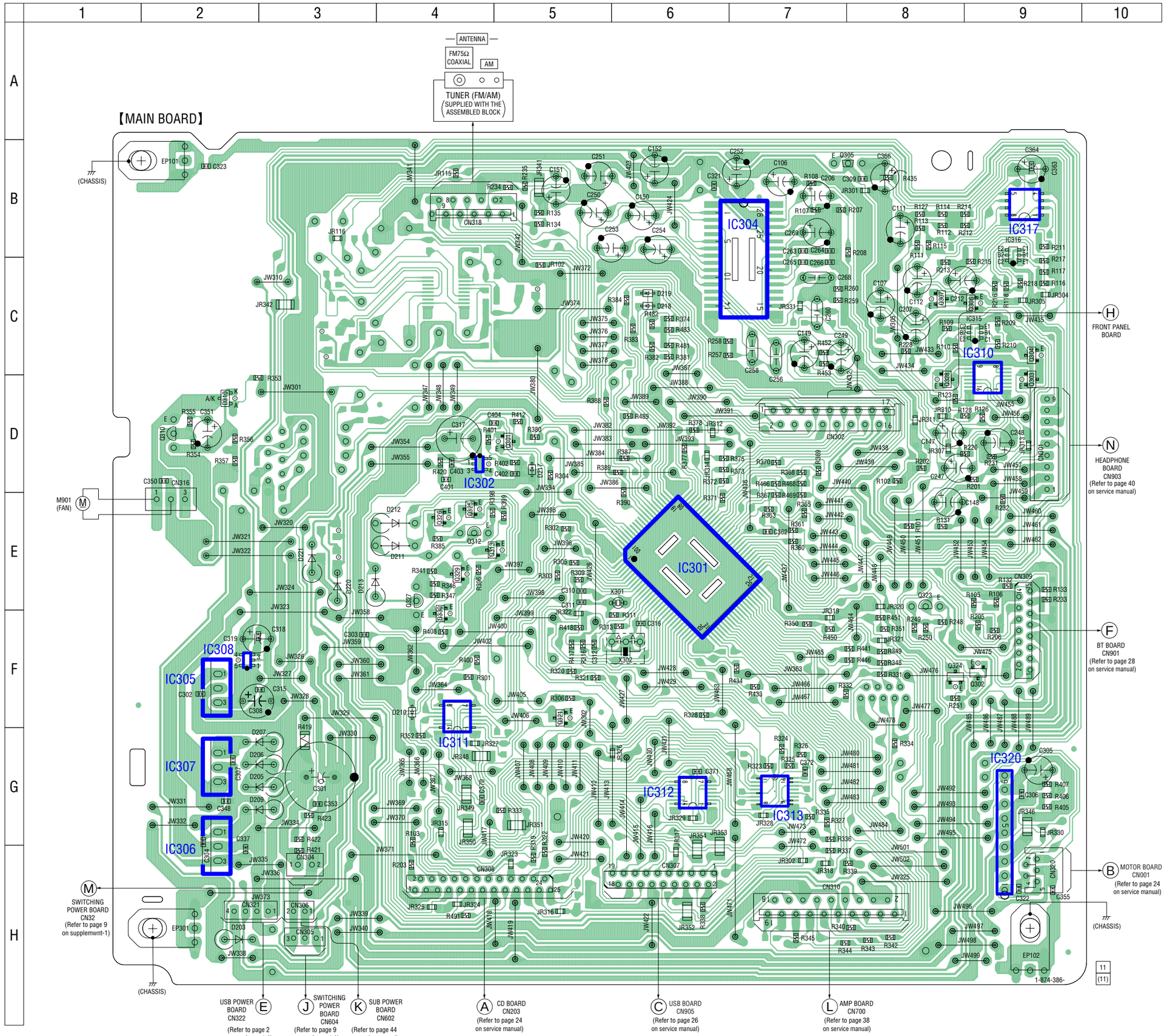
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  [ ] : USB
  { } : BLUETOOTH
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : AUDIO
  ➡ : TUNER (FM/AM)
  ⇨ : CD PLAY
  ▱ : USB
  ⇉ : AUDIO IN

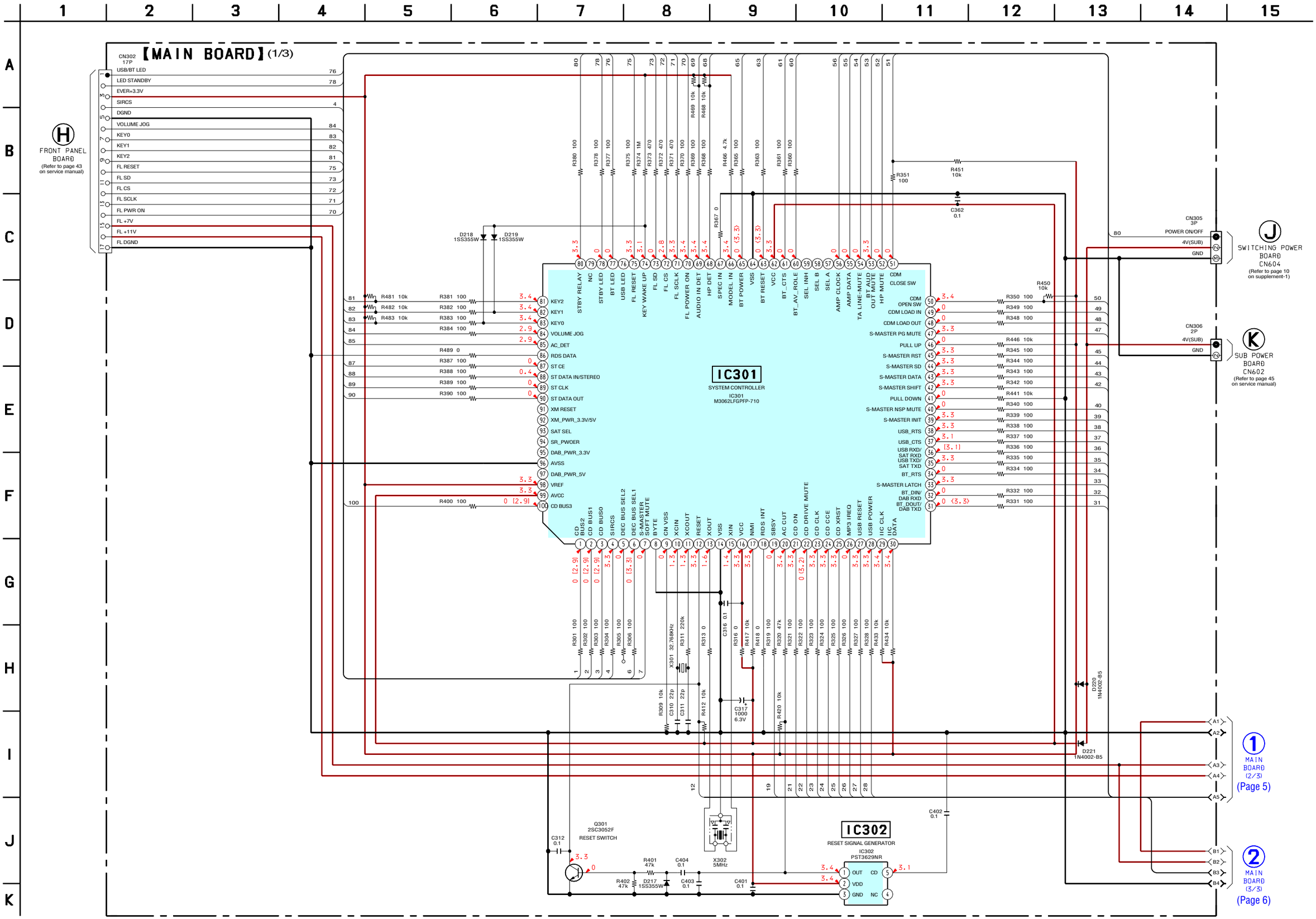
1-1-1. PRINTED WIRING BOARD – MAIN Board (for Singapore model of HCD-HX5) – : Uses unleaded solder.



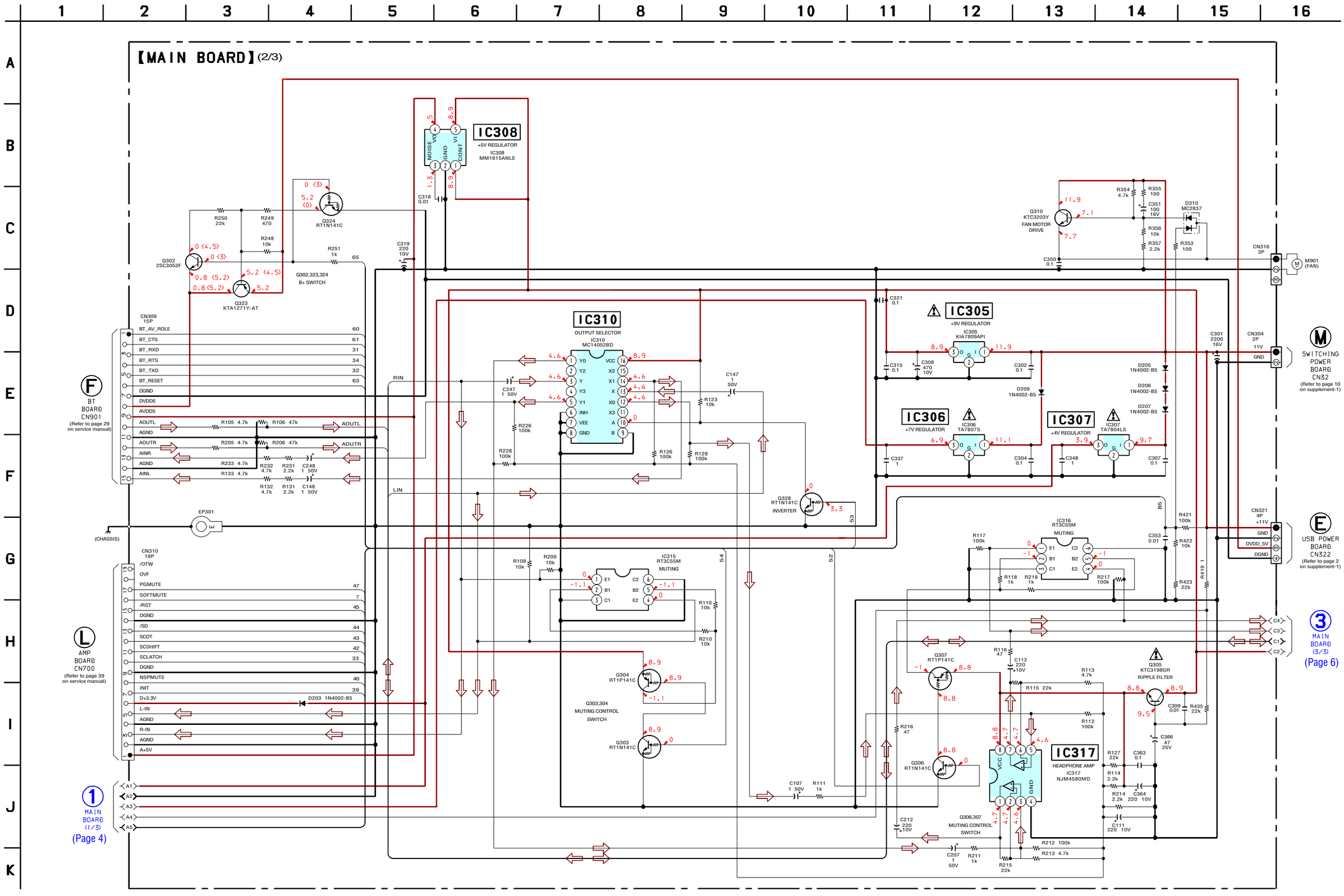
- **Semiconductor Location**

Ref. No.	Location
D203	H-2
D205	G-3
D206	G-3
D207	G-3
D209	G-3
D210	F-4
D211	E-4
D212	E-4
D213	E-3
D217	D-5
D218	C-6
D219	C-6
D220	E-3
D221	E-3
D310	D-2
IC301	E-6
IC302	D-4
IC304	B-7
IC305	F-2
IC306	H-2
IC307	G-2
IC308	F-2
IC310	D-9
IC311	F-4
IC312	G-6
IC313	G-7
IC315	C-9
IC316	B-9
IC317	B-9
IC320	G-9
Q301	D-5
Q302	F-9
Q303	D-9
Q304	C-9
Q305	B-8
Q306	C-9
Q307	C-8
Q310	D-2
Q312	E-4
Q313	E-4
Q321	F-5
Q323	E-8
Q324	F-8
Q325	E-4
Q326	E-4
Q327	E-4
Q328	D-8
Q329	E-4
Q330	F-4

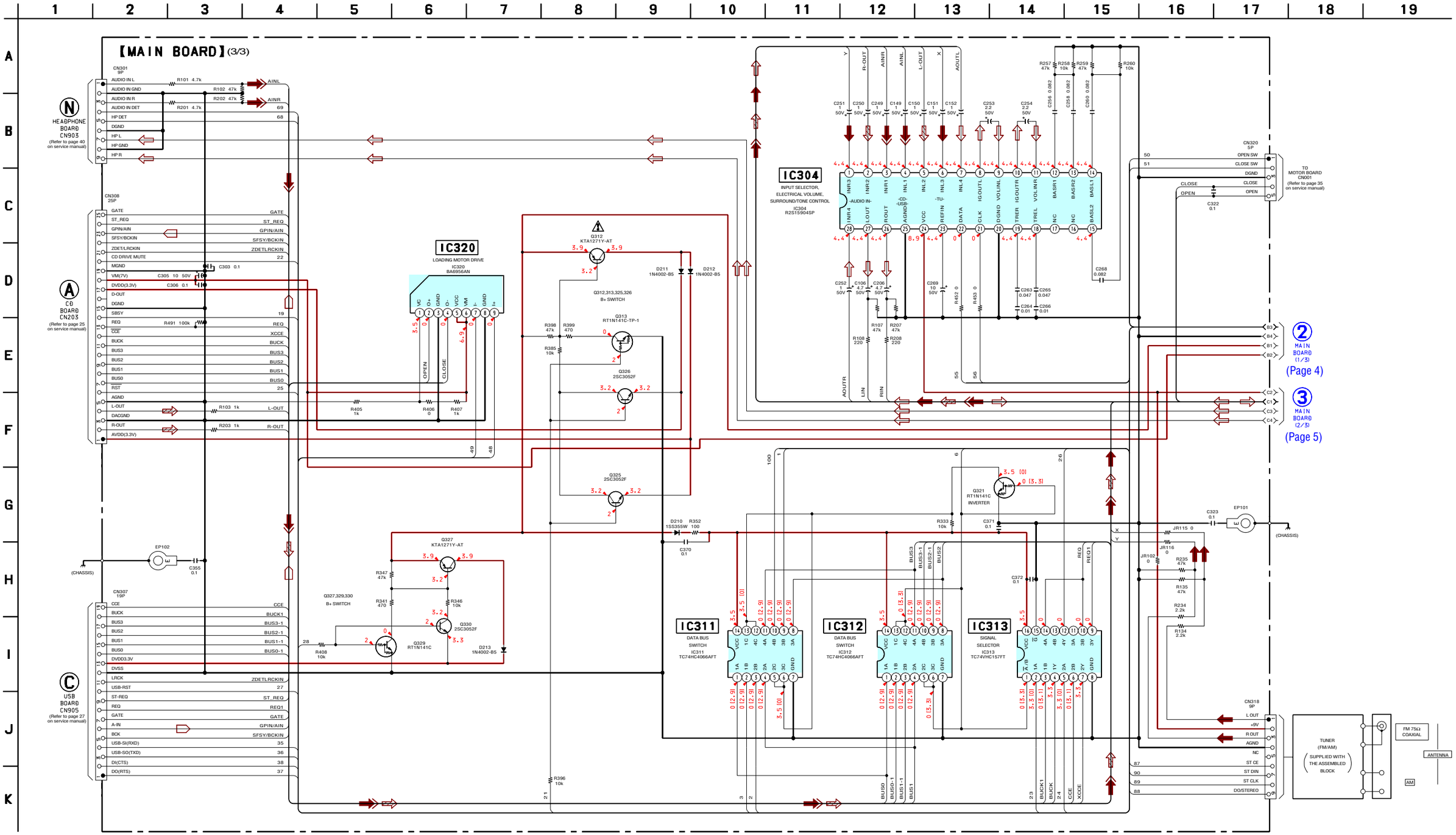
1-1-2. SCHEMATIC DIAGRAM – MAIN Board (1/3) (for Singapore model of HCD-HX5) –



1-1-3. SCHEMATIC DIAGRAM – MAIN Board (2/3) (for Singapore model of HCD-HX5) –



1-1-4. SCHEMATIC DIAGRAM – MAIN Board (3/3) (for Singapore model of HCD-HX5) –



MAIN

1-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-1309-209-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C106	1-126-963-11	ELECT	4.7uF	20%	50V
C107	1-126-960-11	ELECT	1uF	20%	50V
C111	1-126-923-91	ELECT	220uF	20%	10V
C112	1-126-923-91	ELECT	220uF	20%	10V
C147	1-126-960-11	ELECT	1uF	20%	50V
C148	1-126-960-11	ELECT	1uF	20%	50V
C149	1-126-960-11	ELECT	1uF	20%	50V
C150	1-126-960-11	ELECT	1uF	20%	50V
C151	1-126-960-11	ELECT	1uF	20%	50V
C152	1-126-960-11	ELECT	1uF	20%	50V
C206	1-126-963-11	ELECT	4.7uF	20%	50V
C207	1-126-960-11	ELECT	1uF	20%	50V
C212	1-126-923-91	ELECT	220uF	20%	10V
C247	1-126-960-11	ELECT	1uF	20%	50V
C248	1-126-960-11	ELECT	1uF	20%	50V
C249	1-126-960-11	ELECT	1uF	20%	50V
C250	1-126-960-11	ELECT	1uF	20%	50V
C251	1-126-960-11	ELECT	1uF	20%	50V
C252	1-126-960-11	ELECT	1uF	20%	50V
C253	1-126-961-11	ELECT	2.2uF	20%	50V
C254	1-126-961-11	ELECT	2.2uF	20%	50V
C256	1-130-494-11	MYLAR	0.082uF	5%	50V
C258	1-130-494-11	MYLAR	0.082uF	5%	50V
C260	1-130-494-11	MYLAR	0.082uF	5%	50V
C263	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C264	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C265	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C266	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C268	1-130-494-11	MYLAR	0.082uF	5%	50V
C269	1-126-964-11	ELECT	10uF	20%	50V
C301	1-126-768-11	ELECT	2200uF	20%	16V
C302	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C305	1-124-261-00	ELECT	10uF	20%	50V
C306	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-126-925-91	ELECT	470uF	20%	10V

Ref. No.	Part No.	Description			Remark
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C317	1-126-916-11	ELECT	1000uF	20%	6.3V
C318	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C319	1-126-923-91	ELECT	220uF	20%	10V
C321	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C323	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C337	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C348	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C350	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C351	1-126-933-11	ELECT	100uF	20%	16V
C353	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C355	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C362	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C363	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C364	1-126-923-91	ELECT	220uF	20%	10V
C366	1-126-947-11	ELECT	47uF	20%	35V
C370	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C372	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C401	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN301	1-815-450-11	PIN, CONNECTOR (PWB) 9P			
CN302	1-784-778-11	CONNECTOR, FFC 17P			
CN304	1-819-130-11	PIN, CONNECTOR 2P			
CN305	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
CN306	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
CN307	1-779-287-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P			
CN308	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF)) 25P			
CN309	1-779-283-11	CONNECTOR, FFC (LIF (NON-ZIF)) 15P			
CN310	1-784-780-11	CONNECTOR, FFC 19P			
CN316	1-819-131-11	PIN, CONNECTOR 3P			
CN318	1-568-828-11	CONNECTOR, FFC 9P			
CN320	1-779-542-21	CONNECTOR, FFC (LIF (NON-ZIF)) 5P			

MAIN

Ref. No.	Part No.	Description	Remark
CN321	1-815-445-11	PIN, CONNECTOR (PWB) 4P	
		< DIODE >	
D203	6-501-582-01	DIODE 1N4002-B5	
D205	6-501-582-01	DIODE 1N4002-B5	
D206	6-501-582-01	DIODE 1N4002-B5	
D207	6-501-582-01	DIODE 1N4002-B5	
D209	6-501-582-01	DIODE 1N4002-B5	
D210	6-501-193-01	DIODE 1SS355WTE-17	
D211	6-501-582-01	DIODE 1N4002-B5	
D212	6-501-582-01	DIODE 1N4002-B5	
D213	6-501-582-01	DIODE 1N4002-B5	
D217	6-501-193-01	DIODE 1SS355WTE-17	
D218	6-501-193-01	DIODE 1SS355WTE-17	
D219	6-501-193-01	DIODE 1SS355WTE-17	
D220	6-501-582-01	DIODE 1N4002-B5	
D221	6-501-582-01	DIODE 1N4002-B5	
D310	6-501-579-01	DIODE MC2837	
		< EARTH TERMINAL >	
EP101	1-537-771-21	TERMINAL BOARD, GROUND	
EP102	1-537-771-21	TERMINAL BOARD, GROUND	
EP301	1-537-771-21	TERMINAL BOARD, GROUND	
		< IC/TRANSISTOR >	
IC301	6-807-530-01	IC M3062LFGPFP-710 (for SERVICE)	
IC302	6-701-680-01	IC PST3629NR	
IC304	6-710-289-01	IC R2S15904SP	
⚠IC305	6-700-830-01	IC KIA7809API	
⚠IC306	8-759-071-48	IC TA7807S	
⚠IC307	6-703-546-01	IC TA7804LS	
IC308	6-707-282-01	IC MM1615ANLE	
IC310	8-759-430-37	IC MC14052BDTR2	
IC311	8-759-523-03	IC TC74HC4066AFT (EL)	
IC312	8-759-523-03	IC TC74HC4066AFT (EL)	
IC313	6-707-870-01	IC TC74VHC157FT (EKJ)	
IC315	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC316	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC317	8-759-656-83	IC NJM4580MD- (TE2)	
IC320	8-759-598-69	IC BA6956AN	
		< JUMPER RESISTOR >	
JR102	1-216-864-11	SHORT CHIP 0	
JR115	1-216-864-11	SHORT CHIP 0	
JR116	1-216-864-11	SHORT CHIP 0	
JR301	1-216-864-11	SHORT CHIP 0	
JR302	1-216-864-11	SHORT CHIP 0	
JR304	1-216-864-11	SHORT CHIP 0	
JR305	1-216-864-11	SHORT CHIP 0	
JR307	1-216-864-11	SHORT CHIP 0	
JR310	1-216-864-11	SHORT CHIP 0	
JR311	1-216-864-11	SHORT CHIP 0	
JR312	1-216-864-11	SHORT CHIP 0	
JR313	1-216-864-11	SHORT CHIP 0	
JR314	1-216-864-11	SHORT CHIP 0	
JR315	1-216-864-11	SHORT CHIP 0	
JR316	1-216-864-11	SHORT CHIP 0	
JR317	1-216-864-11	SHORT CHIP 0	

Ref. No.	Part No.	Description	Remark
JR318	1-216-864-11	SHORT CHIP 0	
JR319	1-216-864-11	SHORT CHIP 0	
JR320	1-216-864-11	SHORT CHIP 0	
JR321	1-216-864-11	SHORT CHIP 0	
JR322	1-216-864-11	SHORT CHIP 0	
JR323	1-216-864-11	SHORT CHIP 0	
JR324	1-216-864-11	SHORT CHIP 0	
JR325	1-216-864-11	SHORT CHIP 0	
JR326	1-216-864-11	SHORT CHIP 0	
JR327	1-216-864-11	SHORT CHIP 0	
JR328	1-216-864-11	SHORT CHIP 0	
JR329	1-216-864-11	SHORT CHIP 0	
JR330	1-216-864-11	SHORT CHIP 0	
JR331	1-216-864-11	SHORT CHIP 0	
JR341	1-216-296-11	SHORT CHIP 0	
JR342	1-216-296-11	SHORT CHIP 0	
JR346	1-216-296-11	SHORT CHIP 0	
JR348	1-216-296-11	SHORT CHIP 0	
JR349	1-216-296-11	SHORT CHIP 0	
JR350	1-216-296-11	SHORT CHIP 0	
JR351	1-216-296-11	SHORT CHIP 0	
JR352	1-216-296-11	SHORT CHIP 0	
JR353	1-216-296-11	SHORT CHIP 0	
JR354	1-216-296-11	SHORT CHIP 0	
		< TRANSISTOR >	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q303	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q304	8-729-027-23	TRANSISTOR DTA114EKA-T146	
⚠Q305	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q306	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q307	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q310	8-729-212-02	TRANSISTOR 2SC2120-Y	
⚠Q312	8-729-037-13	TRANSISTOR KTA1271Y	
Q313	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q321	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q323	8-729-037-13	TRANSISTOR KTA1271Y	
Q324	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q325	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q326	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q327	8-729-037-13	TRANSISTOR KTA1271Y	
Q328	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q329	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q330	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R101	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R103	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R105	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R106	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R107	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R108	1-216-813-11	METAL CHIP 220 5% 1/10W	
R109	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R110	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R111	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R112	1-216-845-11	METAL CHIP 100K 5% 1/10W	

MAIN

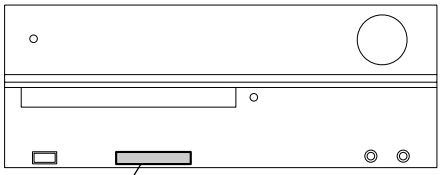
Ref. No.	Part No.	Description			Remark
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R115	1-216-837-11	METAL CHIP	22K	5%	1/10W
R116	1-216-805-11	METAL CHIP	47	5%	1/10W
R117	1-216-845-11	METAL CHIP	100K	5%	1/10W
R118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-845-11	METAL CHIP	100K	5%	1/10W
R127	1-216-837-11	METAL CHIP	22K	5%	1/10W
R128	1-216-845-11	METAL CHIP	100K	5%	1/10W
R131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R135	1-216-841-11	METAL CHIP	47K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-841-11	METAL CHIP	47K	5%	1/10W
R203	1-216-821-11	METAL CHIP	1K	5%	1/10W
R205	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R206	1-216-841-11	METAL CHIP	47K	5%	1/10W
R207	1-216-841-11	METAL CHIP	47K	5%	1/10W
R208	1-216-813-11	METAL CHIP	220	5%	1/10W
R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R212	1-216-845-11	METAL CHIP	100K	5%	1/10W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R215	1-216-837-11	METAL CHIP	22K	5%	1/10W
R216	1-216-805-11	METAL CHIP	47	5%	1/10W
R217	1-216-845-11	METAL CHIP	100K	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R226	1-216-845-11	METAL CHIP	100K	5%	1/10W
R228	1-216-845-11	METAL CHIP	100K	5%	1/10W
R231	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R233	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R234	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R235	1-216-841-11	METAL CHIP	47K	5%	1/10W
R248	1-216-833-11	METAL CHIP	10K	5%	1/10W
R249	1-216-817-11	METAL CHIP	470	5%	1/10W
R250	1-216-837-11	METAL CHIP	22K	5%	1/10W
R251	1-216-821-11	METAL CHIP	1K	5%	1/10W
R257	1-216-841-11	METAL CHIP	47K	5%	1/10W
R258	1-216-833-11	METAL CHIP	10K	5%	1/10W
R259	1-216-841-11	METAL CHIP	47K	5%	1/10W
R260	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-809-11	METAL CHIP	100	5%	1/10W
R304	1-216-809-11	METAL CHIP	100	5%	1/10W
R305	1-216-809-11	METAL CHIP	100	5%	1/10W
R306	1-216-809-11	METAL CHIP	100	5%	1/10W
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W
R311	1-216-849-11	METAL CHIP	220K	5%	1/10W
R313	1-216-864-11	SHORT CHIP	0		
R316	1-216-864-11	SHORT CHIP	0		
R319	1-216-809-11	METAL CHIP	100	5%	1/10W
R320	1-216-841-11	METAL CHIP	47K	5%	1/10W
R321	1-216-809-11	METAL CHIP	100	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-809-11	METAL CHIP	100	5%	1/10W
R326	1-216-809-11	METAL CHIP	100	5%	1/10W
R327	1-216-809-11	METAL CHIP	100	5%	1/10W
R328	1-216-809-11	METAL CHIP	100	5%	1/10W
R331	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-809-11	METAL CHIP	100	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-809-11	METAL CHIP	100	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-809-11	METAL CHIP	100	5%	1/10W
R338	1-216-809-11	METAL CHIP	100	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R341	1-216-817-11	METAL CHIP	470	5%	1/10W
R342	1-216-809-11	METAL CHIP	100	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-809-11	METAL CHIP	100	5%	1/10W
R346	1-216-833-11	METAL CHIP	10K	5%	1/10W
R347	1-216-841-11	METAL CHIP	47K	5%	1/10W
R348	1-216-809-11	METAL CHIP	100	5%	1/10W
R349	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R355	1-216-809-11	METAL CHIP	100	5%	1/10W
R356	1-216-833-11	METAL CHIP	10K	5%	1/10W
R357	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R360	1-216-809-11	METAL CHIP	100	5%	1/10W
R361	1-216-809-11	METAL CHIP	100	5%	1/10W
R363	1-216-809-11	METAL CHIP	100	5%	1/10W
R365	1-216-809-11	METAL CHIP	100	5%	1/10W
R367	1-216-864-11	SHORT CHIP	0		
R368	1-216-809-11	METAL CHIP	100	5%	1/10W
R369	1-216-809-11	METAL CHIP	100	5%	1/10W
R370	1-216-809-11	METAL CHIP	100	5%	1/10W
R371	1-216-817-11	METAL CHIP	470	5%	1/10W
R372	1-216-817-11	METAL CHIP	470	5%	1/10W
R373	1-216-817-11	METAL CHIP	470	5%	1/10W
R374	1-216-857-11	METAL CHIP	1M	5%	1/10W
R375	1-216-809-11	METAL CHIP	100	5%	1/10W
R377	1-216-809-11	METAL CHIP	100	5%	1/10W
R378	1-216-809-11	METAL CHIP	100	5%	1/10W
R380	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
R385	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R387	1-216-809-11	METAL CHIP	100	5%	1/10W
R388	1-216-809-11	METAL CHIP	100	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R396	1-216-833-11	METAL CHIP	10K	5%	1/10W
R398	1-216-841-11	METAL CHIP	47K	5%	1/10W
R399	1-216-817-11	METAL CHIP	470	5%	1/10W
R400	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-841-11	METAL CHIP	47K	5%	1/10W
R402	1-216-841-11	METAL CHIP	47K	5%	1/10W
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R418	1-216-864-11	SHORT CHIP	0		
R419	1-217-806-11	RES-CHIP	1	5%	1/8W
R420	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-845-11	METAL CHIP	100K	5%	1/10W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W
R423	1-216-837-11	METAL CHIP	22K	5%	1/10W
R433	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-833-11	METAL CHIP	10K	5%	1/10W
R435	1-216-837-11	METAL CHIP	22K	5%	1/10W
R441	1-216-833-11	METAL CHIP	10K	5%	1/10W
R446	1-216-833-11	METAL CHIP	10K	5%	1/10W
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-833-11	METAL CHIP	10K	5%	1/10W
R452	1-216-864-11	SHORT CHIP	0		
R453	1-216-864-11	SHORT CHIP	0		
R466	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R468	1-216-833-11	METAL CHIP	10K	5%	1/10W
R469	1-216-833-11	METAL CHIP	10K	5%	1/10W
R481	1-216-833-11	METAL CHIP	10K	5%	1/10W
R482	1-216-833-11	METAL CHIP	10K	5%	1/10W
R483	1-216-833-11	METAL CHIP	10K	5%	1/10W
R489	1-216-864-11	SHORT CHIP	0		
R491	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< VIBRATOR >			
X301	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X302	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			

2. ADDITION OF HCD-HX3 (E, Mexican, Chilean, Peruvian, Argentina and Russian models) FOR CMT-HX3R

- **HCD-HX3 (for CMT-HX3)/HCD-HX3 (for CMT-HX3R) DISCRIMINATION**



CMT-HX3 : HCD-HX3 (for CMT-HX3)
CMT-HX3R : HCD-HX3 (for CMT-HX3R)

SPECIFICATIONS

Main unit

Amplier section

Russian model:
DIN power output (rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Music power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Other models:
DIN power output (rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Inputs:
AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms
(USB) port: Type A, maximum current 500 mA
Outputs:
PHONES (stereo mini jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 6 ohms

USB section

Supported bit rate
MP3 (MPEG 1 Audio Layer-3): 32 – 320 kbps, VBR
Sampling frequencies
MP3 (MPEG 1 Audio Layer-3): 32/44.1/48 kHz
(USB) port
USB-A (Full Speed)

CD player section

System: Compact disc and digital audio system
Laser Diode Properties
Emission duration: continuous
Laser Output*: Less than 44.6µW
* This is output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section:
Tuning range:
87.5 – 108.0 MHz (50 kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 ohms unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section:
Tuning range
Russian model:
531 – 1,602 kHz (with 9 kHz tuning interval)
Other models:
530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
Antenna: AM loop antenna, external antenna terminal
Intermediate frequency: 450 kHz

General

Power requirements
Russian model: 220 – 240 V AC, 50/60 Hz
Mexican model: 127 V AC, 60 Hz
Argentine model: 220 – 240 V AC, 50/60 Hz
Other models: 120 – 127 V, 220 – 240 V AC, 50/60 Hz, adjustable with voltage selector
Power consumption: 40 watts
Dimensions (w/h/d) (excl. speakers): Approx. 285 × 120 × 215 mm
Mass (excl. speakers): Approx. 2.6 kg

Design and specications are subject to change without notice.

2-1. SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

RELEASING THE ANTITHEFT LOCK

The disc tray lock function for the antitheft of an demonstration disc in the store is equipped.

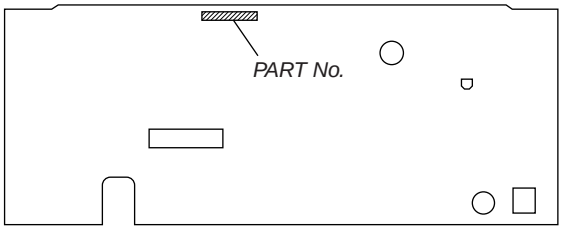
Releasing Procedure :

1. Press the I/⏻ button to turn the power on.
2. While pressing the ■/CANCEL button, press the ⏏ button until “UNLOCKED” displayed on the fluorescent indicator tube (around 5 seconds).

Note: When “LOCKED” is displayed, the antitheft lock is not released by turning power on/off with the I/⏻ button.

MODEL IDENTIFICATION

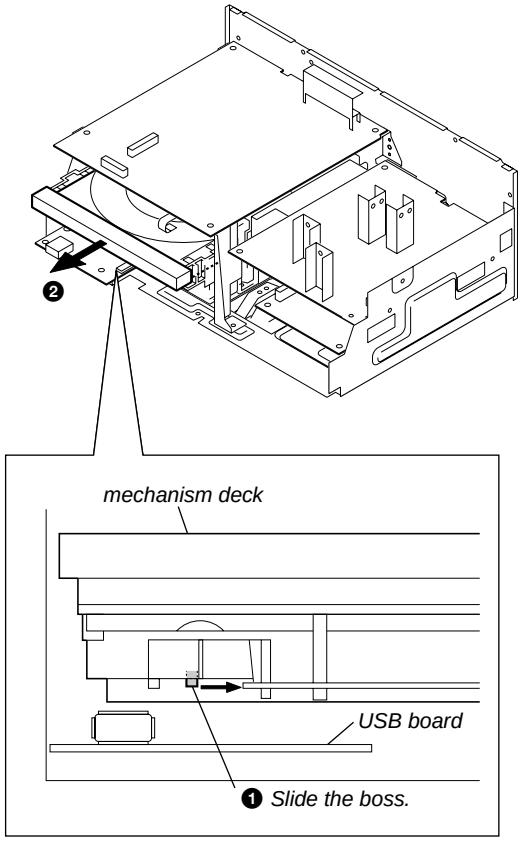
– Back Panel –



MODEL	PART No.
HX3: Mexican	3-096-224-0□
HX3: E, Chilean, Peruvian	3-096-224-1□
HX3: Argentina	3-096-224-2□
HX3: Russian	3-096-224-3□

HOW TO OPEN THE TRAY WHEN POWER SWITCH TURN OFF

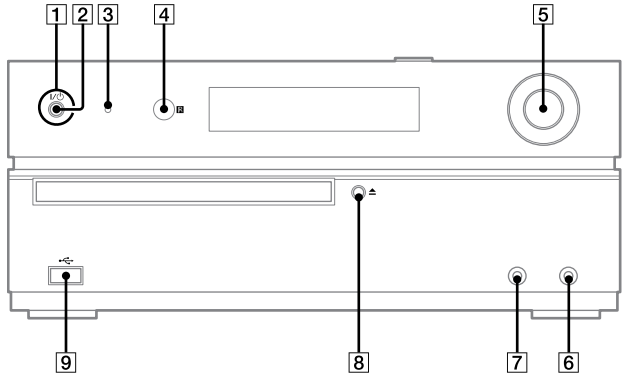
Note: Please resolve it to the state of the figure below referring to 2-3-2. Panel (Top) and 2-3-3. Front Panel Block of DISASSEMBLY.



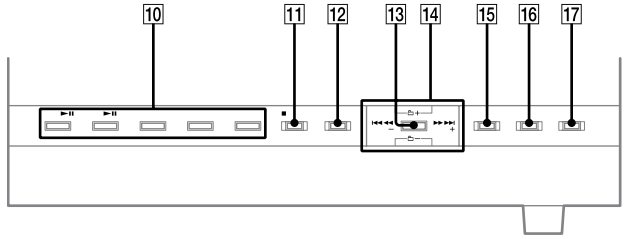
This section is extracted from instruction manual.

2-2. GENERAL

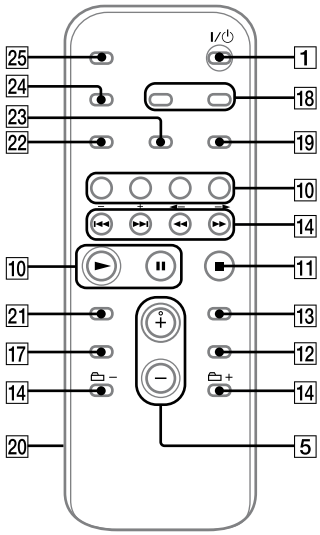
Front panel



Top panel



Remote (RM-SCU35)



1
I/⏻ (power) button
Press to turn on the system.

2
STANDBY indicator
Lights up when the system is turned off.

3
USB MEMORY indicator
Lights up when an optional USB device (Digital music player or USB storage media) is connected.

4
Remote sensor

5
Unit: VOLUME control
Remote: VOLUME +/– button
Turn or press to adjust the volume.

6
AUDIO IN jack
Connect to an optional audio component.

7
PHONES jack
Connect the headphones.

8
⏏ (open/close) button
Press to open or close the disc tray.

9
⇜ (USB) port
Connect to an optional USB device (Digital music player or USB storage media).

10
Playback buttons and function buttons
Unit: USB ►II (play/pause) button
Press to select the USB function.
Press to start or pause playback of an optional USB device (Digital music player or USB storage media).
Remote: USB button
Press to select the USB function.
Unit: CD ►II (play/pause) button
Press to select the CD function.
Press to start or pause playback of a disc.
Remote: CD button
Press to select the CD function.

Remote: ► (play) button, II (pause) button
Press to start or pause playback.

TUNER/BAND button
Press to select the TUNER function.
Press to select FM or AM reception mode.

Unit: AUDIO IN button
Press to select the AUDIO IN function.

FUNCTION button
Press to select the function.

11
Unit: ■/CANCEL (stop/cancel) button
Remote: ■(stop) button
Press to stop playback.
Press to cancel search.

12
SEARCH button
Press to enter or exit search mode.

13
ENTER button
Press to enter the settings.

14
I◄◄/►►I (go back/go forward) button
Press to select a track or file.

Unit: TUNE +/– (tuning) button
Remote: +/– (tuning) button
Press to tune in the desired station.

🗀 +/– (select folder) button
Press to select a folder.

◄◄/►► (rewind/fast forward) button
Press to find a point in a track or file.

15
CD-USB SYNC/REC1 button
Press to record from a disc onto the connected optional USB device (Digital music player or USB storage media).

16
ERASE button
Press to erase MP3 files and folders from the connected optional USB device (Digital music player or USB storage media).

17
Sound buttons
Unit: DSGX button
Remote: EQ button
Press to select the sound effect.

18
CLOCK/TIMER SELECT button
CLOCK/TIMER SET button
Press to set the clock and the Play Timer.

19
REPEAT/FM MODE button
Press to listen to a disc, an USB device, a single track or file repeatedly.
Press to select the FM reception mode (monaural or stereo).

20
Battery compartment lid

21
CLEAR button
Press to delete a pre-programmed track or file.

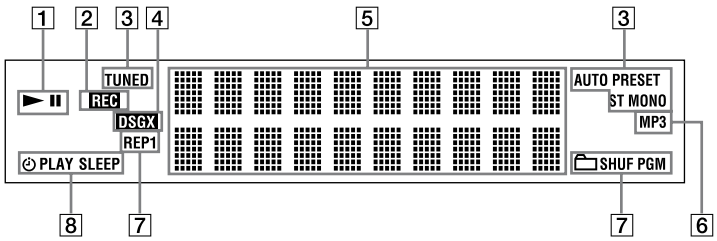
22
TUNER MEMORY button
Press to preset the radio station.

23
PLAY MODE/TUNING MODE button
Press to select the play mode of a CD, MP3 disc or an optional USB device (Digital music player or USB storage media).
Press to select the tuning mode.

24
DISPLAY button
Press to change the information on the display.

25
SLEEP button
Press to set the Sleep Timer.

Information on the display



1
Play/Pause

2
CD-USB Recording

3
Tuner reception mode
Tuner reception

4
DSGX

5
Text information

6
Audio format

7
Play mode

8
Timer

Setting the clock

Use buttons on the remote to set the clock.

1 Press I/⏻ 1 to turn on the system.

2 Press CLOCK/TIMER SET 18.
If the current mode appears on the display, press ⏮/⏭ 14 repeatedly to select “CLOCK SET?” and then press ENTER 13.

3 Press ⏮/⏭ 14 repeatedly to set the hour, and then press ENTER 13.

4 Use the same procedure to set the minutes.
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

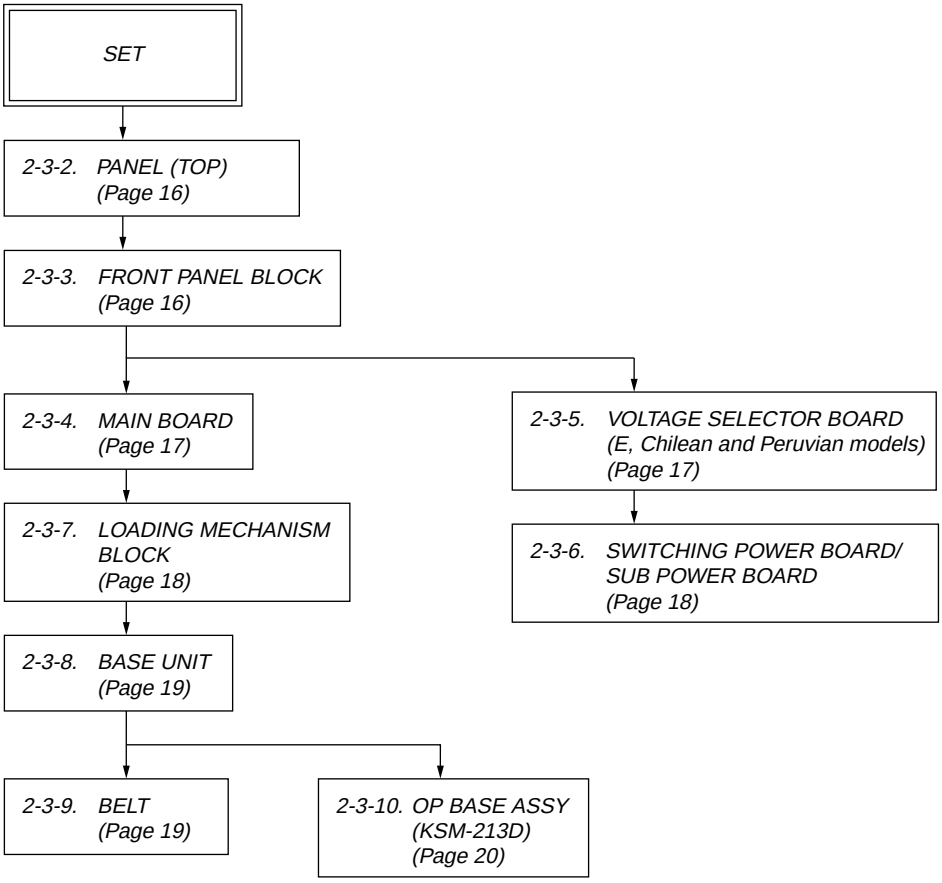
To display the clock when the system is off

Press DISPLAY 24. The clock is displayed for about 8 seconds.

2-3. DISASSEMBLY

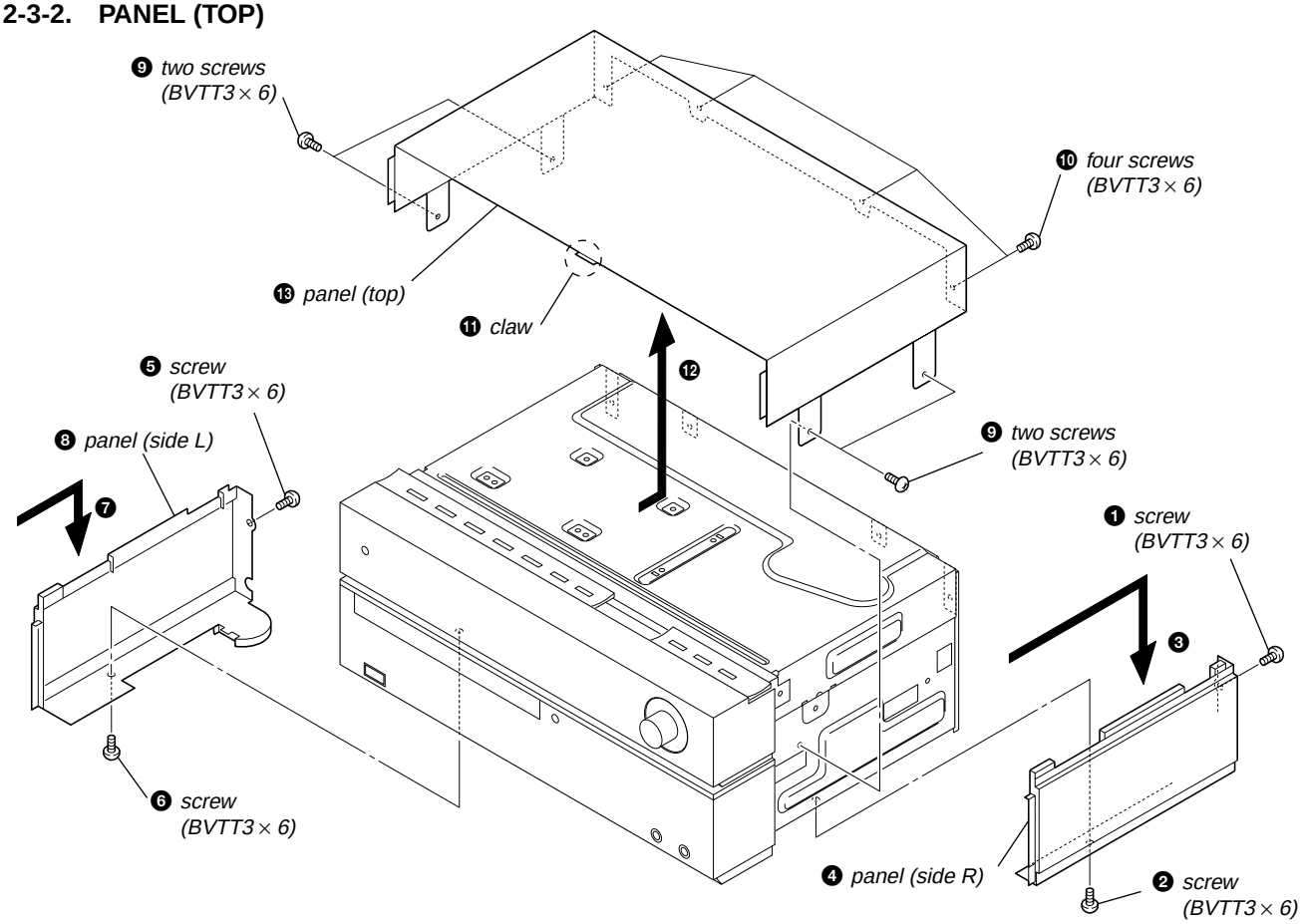
- This set can be assembled in the order shown below.

2-3-1. DISASSEMBLY FLOW

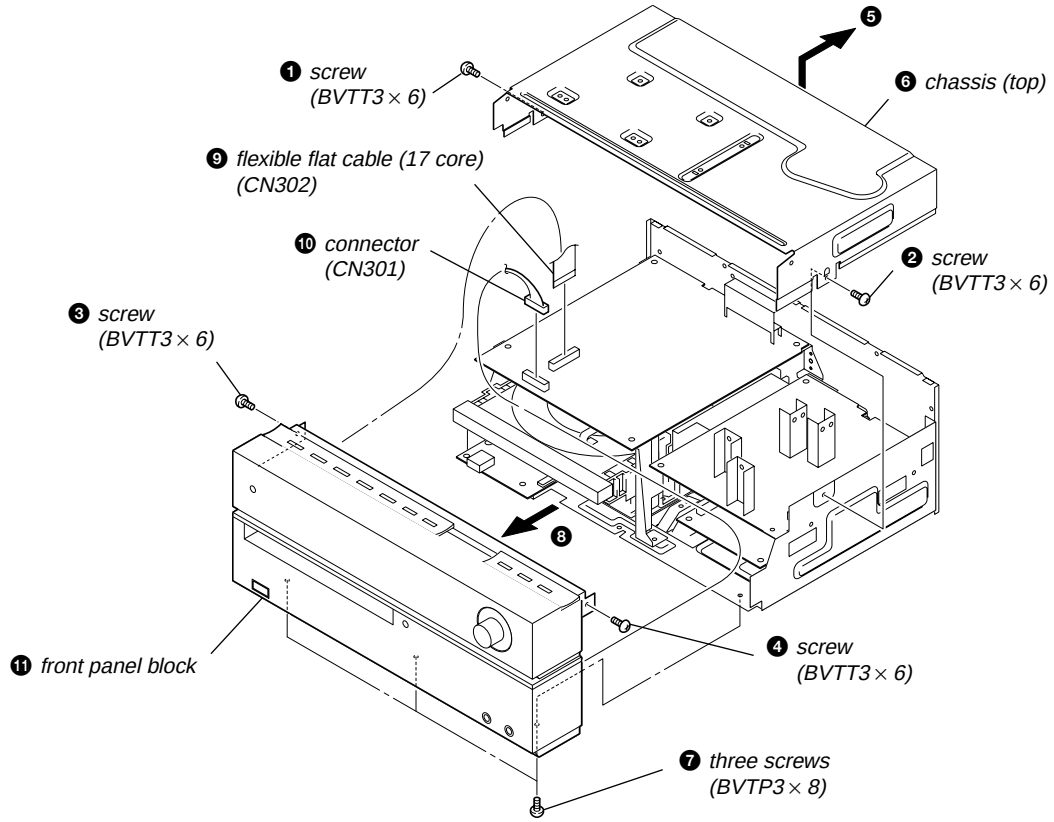


Note: Follow the assembly procedure in the numerical order given.

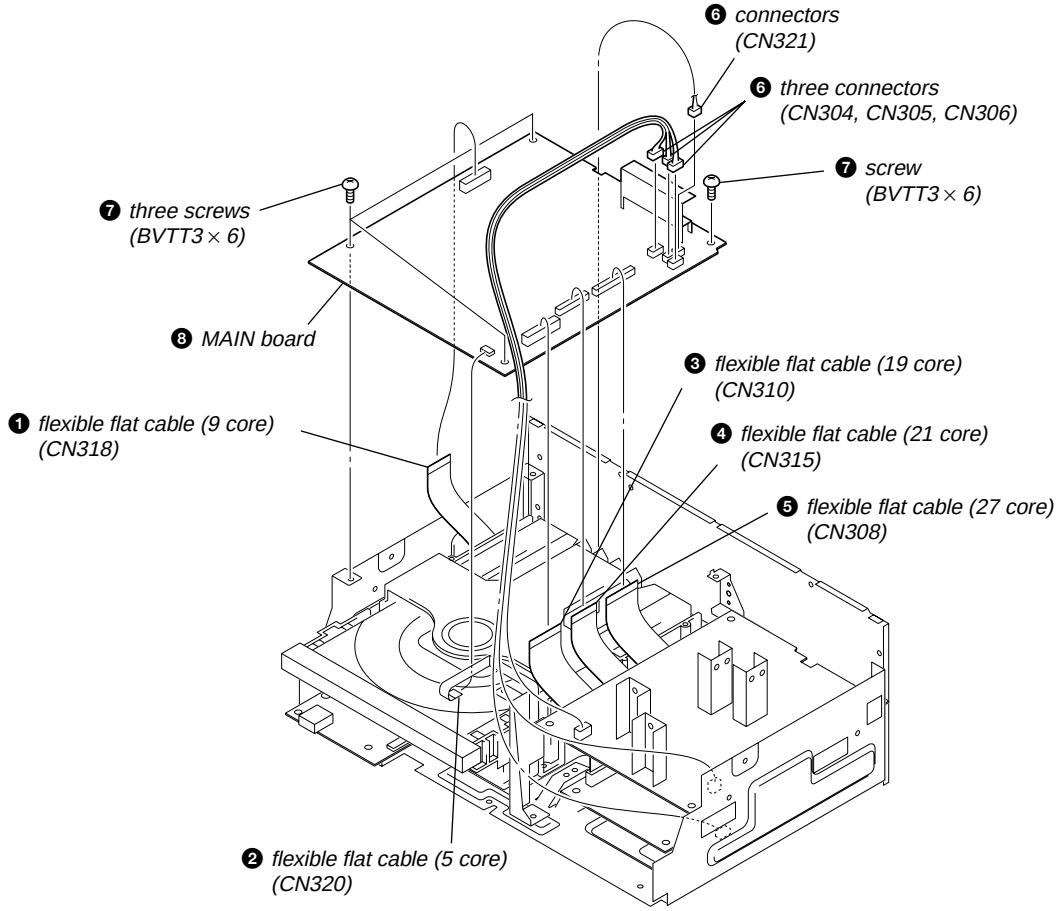
2-3-2. PANEL (TOP)



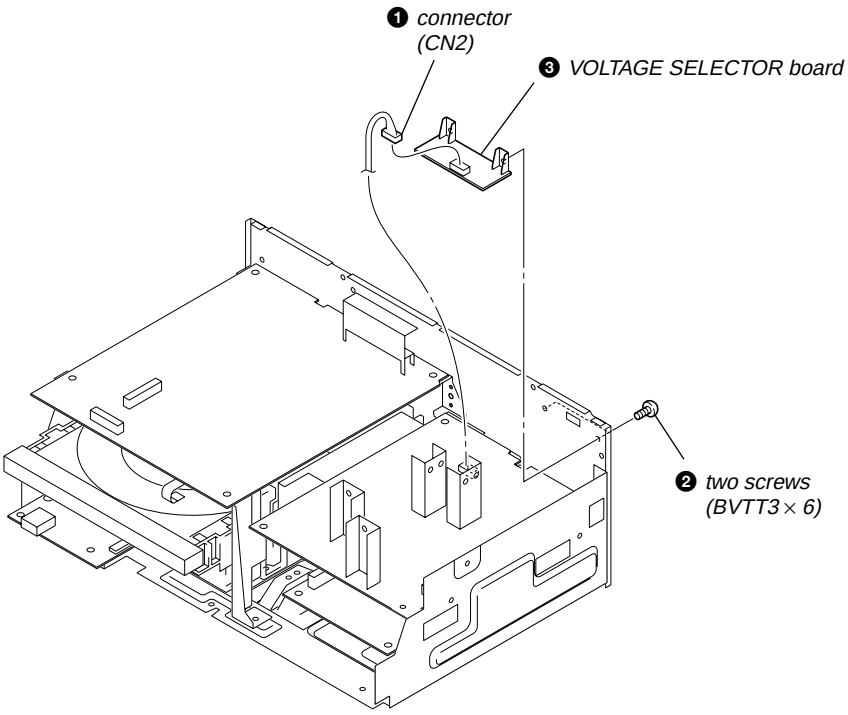
2-3-3. FRONT PANEL BLOCK



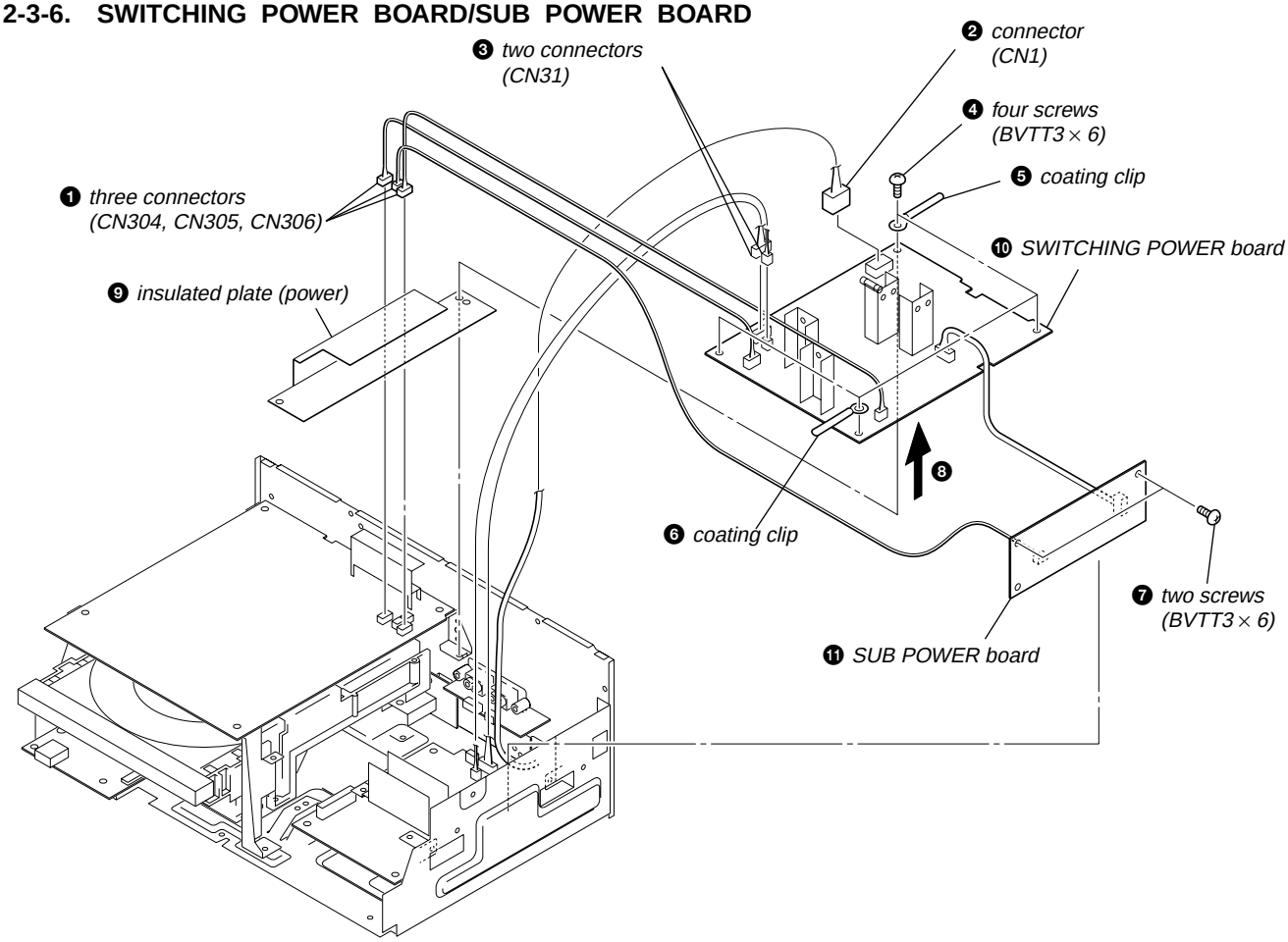
2-3-4. MAIN BOARD (HX3/HX5)



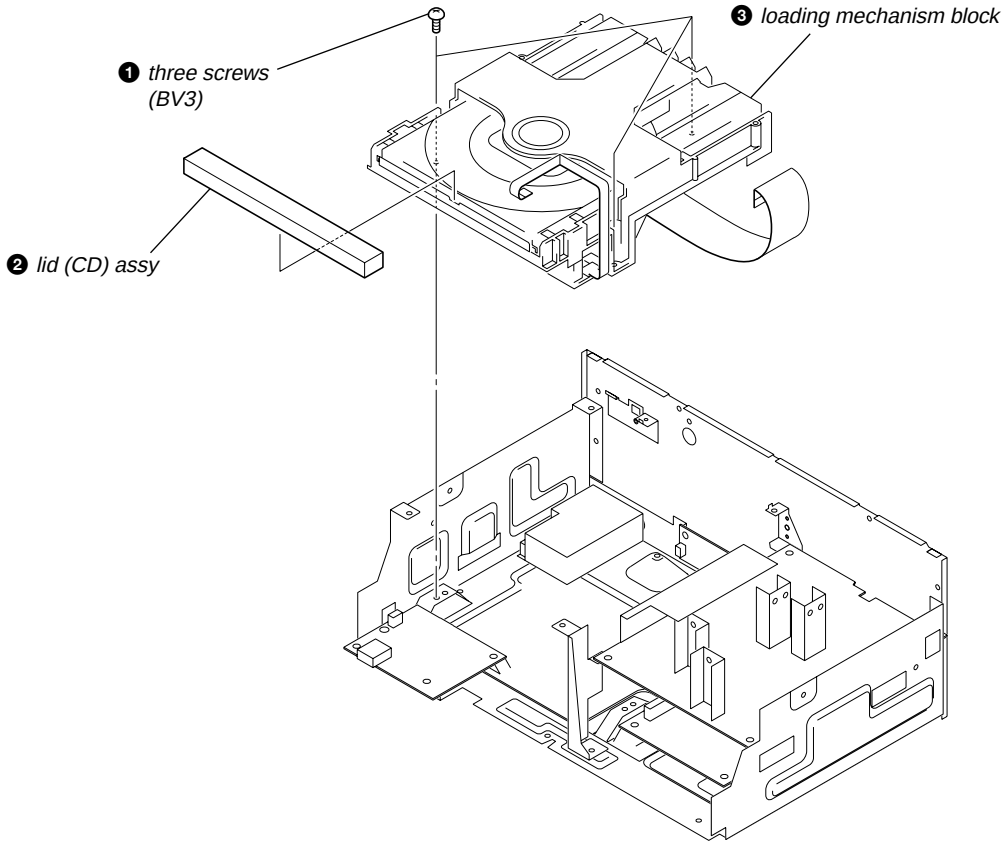
2-3-5. VOLTAGE SELECTOR BOARD (E, Chilean and Peruvian models)



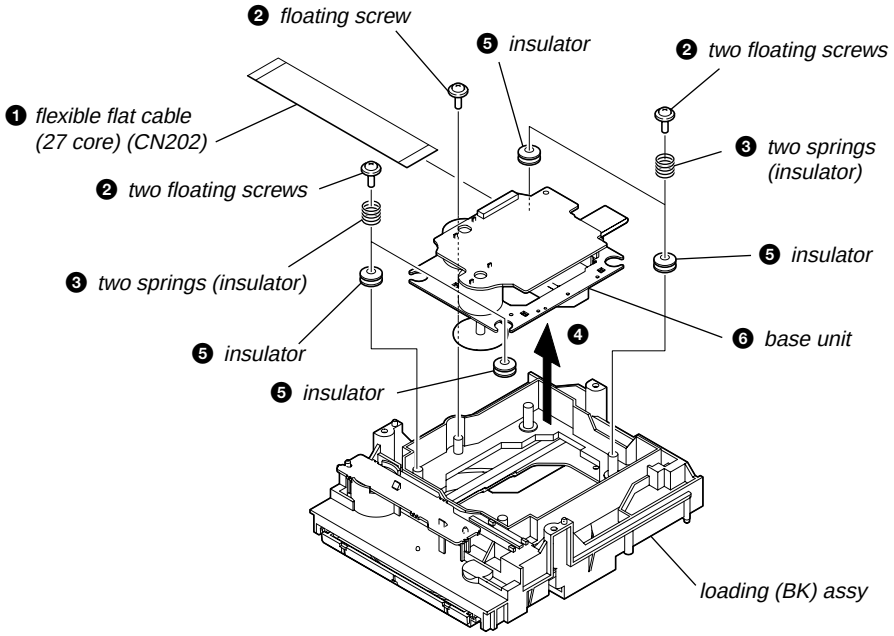
2-3-6. SWITCHING POWER BOARD/SUB POWER BOARD



2-3-7. LOADING MECHANISM BLOCK

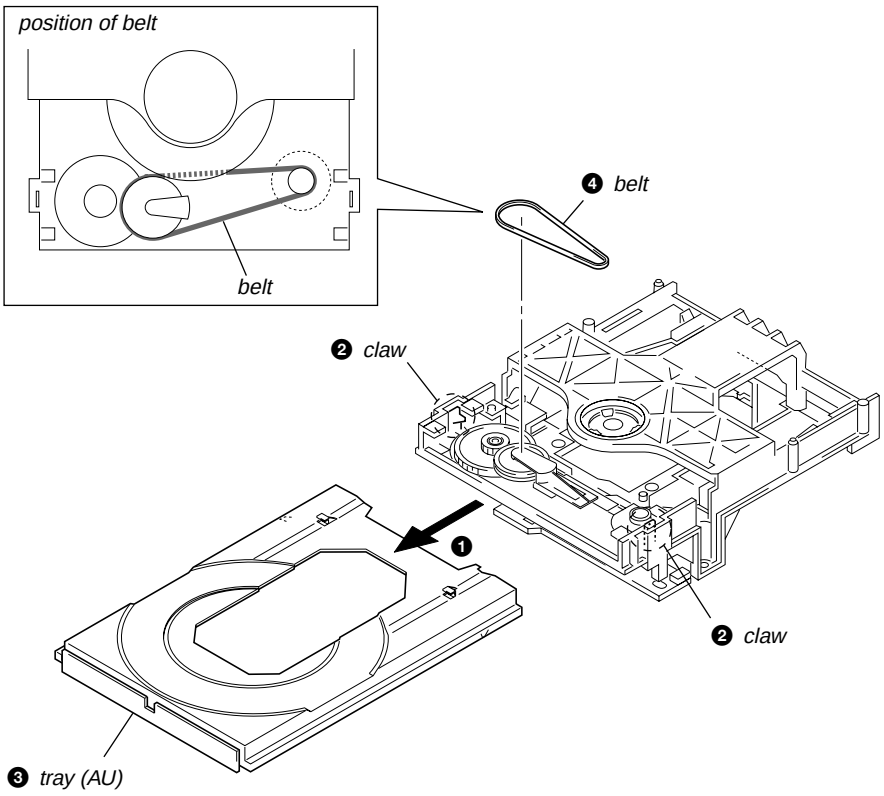


2-3-8. BASE UNIT

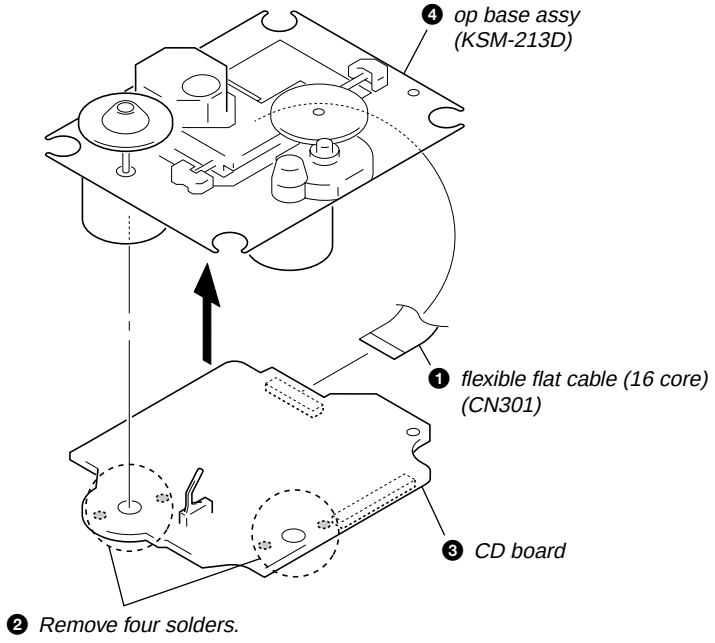


– Bottom view –

2-3-9. BELT



2-3-10. OP BASE ASSY (KSM-213D)



2-4. TEST MODE

COLD RESET

The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons of [■/CANCEL], [DSGX] and [I/⏻] simultaneously.
2. The system is reset and becomes standby states.

COMMON TEST MODE

This mode is used to check operations of amplifier.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [■/CANCEL], [ENTER] and [⏏] simultaneously.
3. When the COMMON test mode is activated, "AUDIO IN" is displayed on the fluorescent indicator tube and "🕘 PLAY SLEEP" blink on the fluorescent indicator tube.
4. Each time [EQ] button on the remote commander is pressed, the display changes starting "TONE MAX", "TONE MIN" and "TONE FLAT" this order.
5. Turn the [VOLUME] knob counterclockwise, "VOLUME MIN" is displayed on the fluorescent indicator tube. Turn the [VOLUME] knob clockwise, "VOLUME MAX" is displayed on the fluorescent indicator tube.
6. To release this mode, press the [I/⏻] button.

PANEL TEST MODE

This mode is used to check the fluorescent indicator tube, LED, model, destination, software version and key.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [■/CANCEL], [DSGX] and [⏏] simultaneously.
3. All segments on the fluorescent indicator tube and [STANDBY] LED light up.
4. Press the [DSGX] button, the model and destination are displayed on the fluorescent indicator tube.
5. Press the [DSGX] button again, MC version is displayed on the fluorescent indicator tube.
6. Each time [DSGX] button is pressed, the display changes starting from MC version, GC version, USBL version, USBM version, CD version, CDD version, CDMA version, CDMB version, BDA version, BDB version, ST version, TA version and TM version this order, and returns to the MC version display.
7. When [SEARCH] button is pressed while the MC version is displayed, year, month and day of the software creation is displayed. When [SEARCH] button is pressed again, the display returns to the MC version display.
8. Press the [ENTER] button, the key test mode is activated and "K 0 V0" is displayed on the fluorescent indicator tube.
9. Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account. All keys are pressed, display becomes "K17".
10. "V" value increases 2, 4, 6 ... if turn the [VOLUME] knob clockwise, or it decreases 8, 6, 4 ... if turn the knob counterclockwise
11. To release this mode, press three buttons in the same manner as step 2, or disconnect the power cord.

TUNER STEP CHANGE

(Except Russian model)

A step of AM tuning interval can be changed over between 9 kHz or 10 kHz.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [TUNER/BAND] button to select "AM".
3. Press the [I/⏻] button again to turn the power off.
4. Press two buttons of [TUNER/BAND] and [I/⏻] simultaneously.
5. The message "AM 9kHz Step" or "AM 10kHz Step" is displayed on the fluorescent indicator tube and thus the tuning interval is changed over.

CD SHIP MODE

This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select "CD".
3. Press two buttons of [SEARCH] and [I/⏻] simultaneously.
4. After the "STANDBY" display blinks, "LOCK" is displayed on the fluorescent indicator tube, and the ship mode is set.

CD SHIP MODE & MEMORY CLEAR

This mode is used to perform CD ship mode and cold reset simultaneously.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [SEARCH], [DSGX] and [I/⏻] simultaneously.
3. After the "STANDBY" display blinks, "LOCK" is displayed on the fluorescent indicator tube, the ship mode is set and the system is reset.

ANTITHEFT LOCK MODE

This mode is used to unable to take sample disc out of disc tray in the shop.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [⏏] button to open the disc tray and set the CD disc.
3. Press the [⏏] button to close the disc tray.
4. Press two buttons of [■/CANCEL] and [⏏] for 5 seconds.
5. The message "LOCKED" is displayed on the fluorescent indicator tube and the disc tray is locked. (Even if pressing the [⏏] button, the message "LOCKED" is displayed on the fluorescent indicator tube and the disc tray is locked)
6. To release from this mode, press two buttons of [■/CANCEL] and [⏏] for 5 seconds.
7. The message "UNLOCKED" is displayed on the fluorescent indicator tube and the disc tray is unlocked.

CD POWER MANAGE

This mode is used to changed over CD power on/off for decreasing of reception noise in the tuner mode.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select "CD".
3. Press the [I/⏻] button again to turn the power off.
4. Press two buttons of [■/CANCEL] and [I/⏻] simultaneously.
5. The message "CD POWER ON" or "CD POWER OFF"is displayed on the fluorescent indicator tube, and CD power on/off is changed over in the tuner mode.

CD SERVICE MODE

This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the optical pick-up.

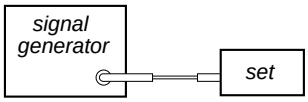
Procedure:

1. Press the I/⏻ button to turn the power on.
2. Press the FUNCTION button to select “CD”.
3. Press three buttons of SEARCH, 🗀+ and ⏏ simultaneously, the message “SERVICE MODE” is displayed on the fluorescent indicator tube.
4. Press the 🗀– button to move the optical pick-up to inside track and the message “SLED IN” is displayed on the fluorescent indicator tube, or press the 🗀+ button to outside track and the message “SLED OUT” is displayed on the fluorescent indicator tube.
5. Press the DSGX button, “LD ON” or “LD OFF” is displayed on the fluorescent indicator tube. Each time DSGX button is pressed, laser diode on/off is changed over.
6. To release this mode, press the I/⏻ button.

2-5. ELECTRICAL CHECKS

TUNER SECTION

FM TUNE LEVEL CHECK



Procedure:

1. Turn on the set.
2. Input the following signal from signal generator to FM antenna input directly.

   Carrier frequency: A = 87.5 MHz, B = 98 MHz, C = 108 MHz

   Deviation : 75 kHz
   Modulation : 1 kHz
   ANT input : 35 dBu (EMF)

Note: Use 75 ohm coaxial cable to connect signal generator and the set.
You cannot use video cable for checking.
Use signal generator whose output impedance is 75 ohm.

3. Set to FM tuner function and tune A, B and C signals.
4. Confirm "TUNED" is lit on the display for A, B and C signals.

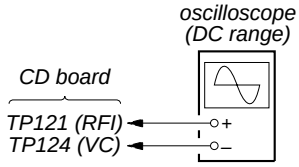
When the selected station signal is received in good condition, "TUNED" is displayed.

CD SECTION

Note:

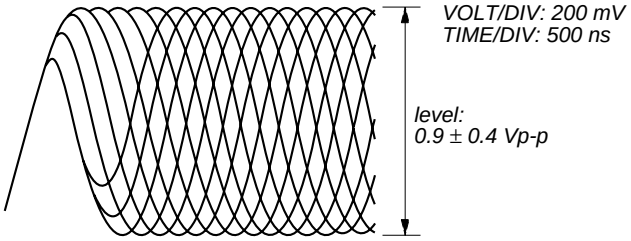
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

FOCUS BIAS CHECK



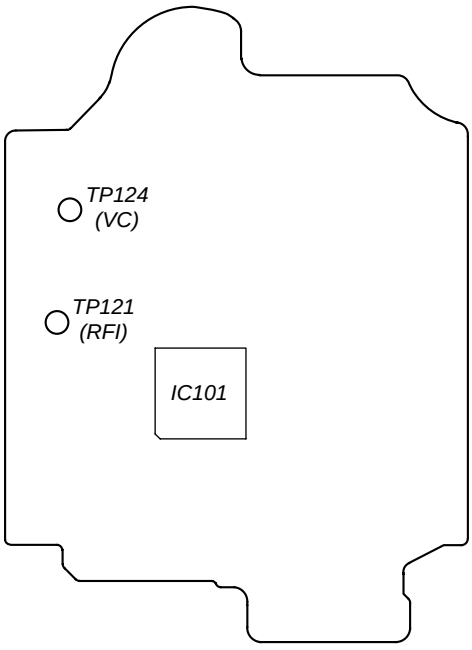
Procedure :

1. Connect oscilloscope to TP121 (RFI) and TP124 (VC) on the CD board.
2. Press the I/⏻ button to turn the power on, and press the ⏏ button to open the disc tray.
3. Set disc (YEDS-18) on the tray and press the CD ▶II button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.



Checking Location:

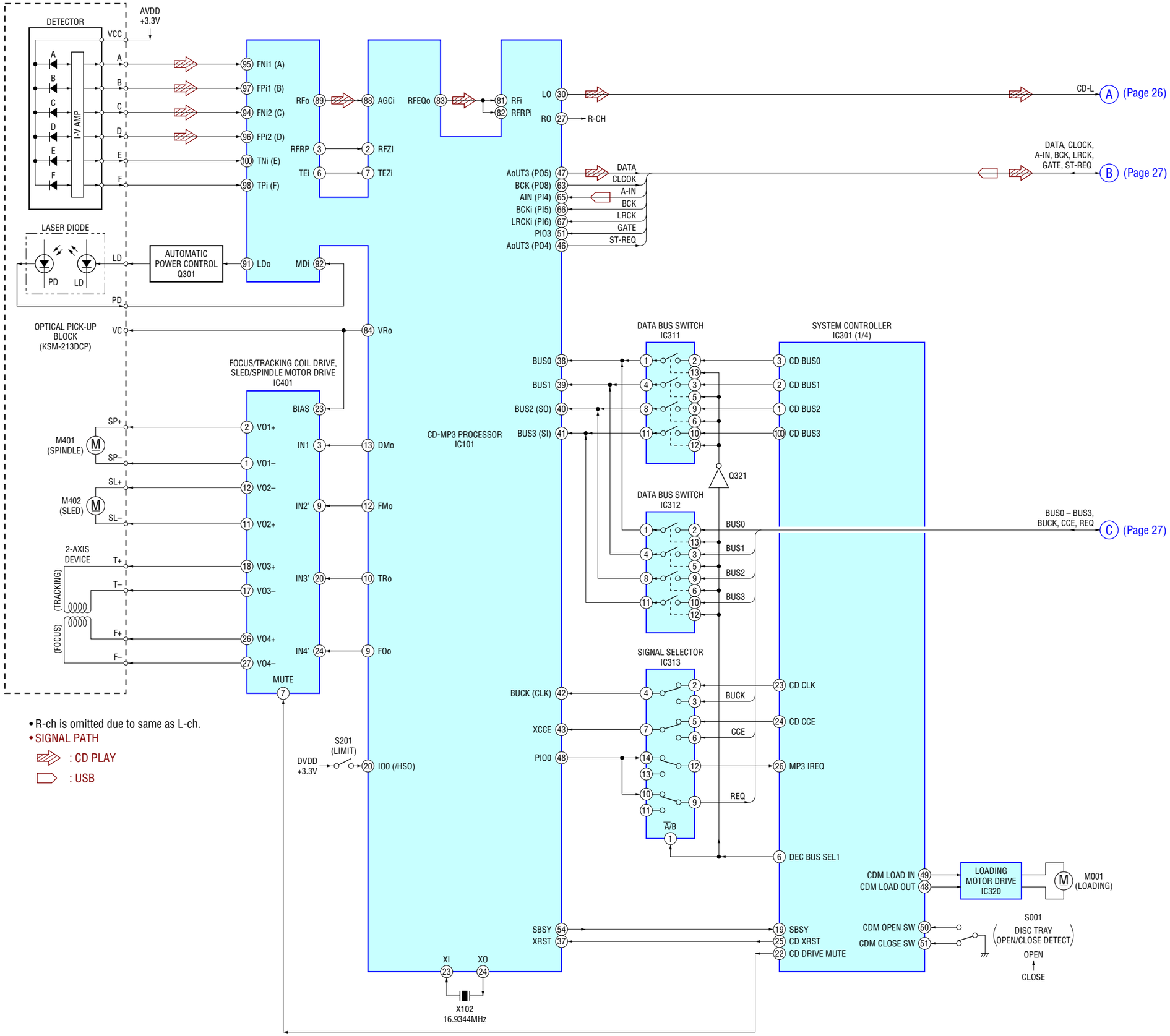
– CD Board (Conductor Side) –



MEMO

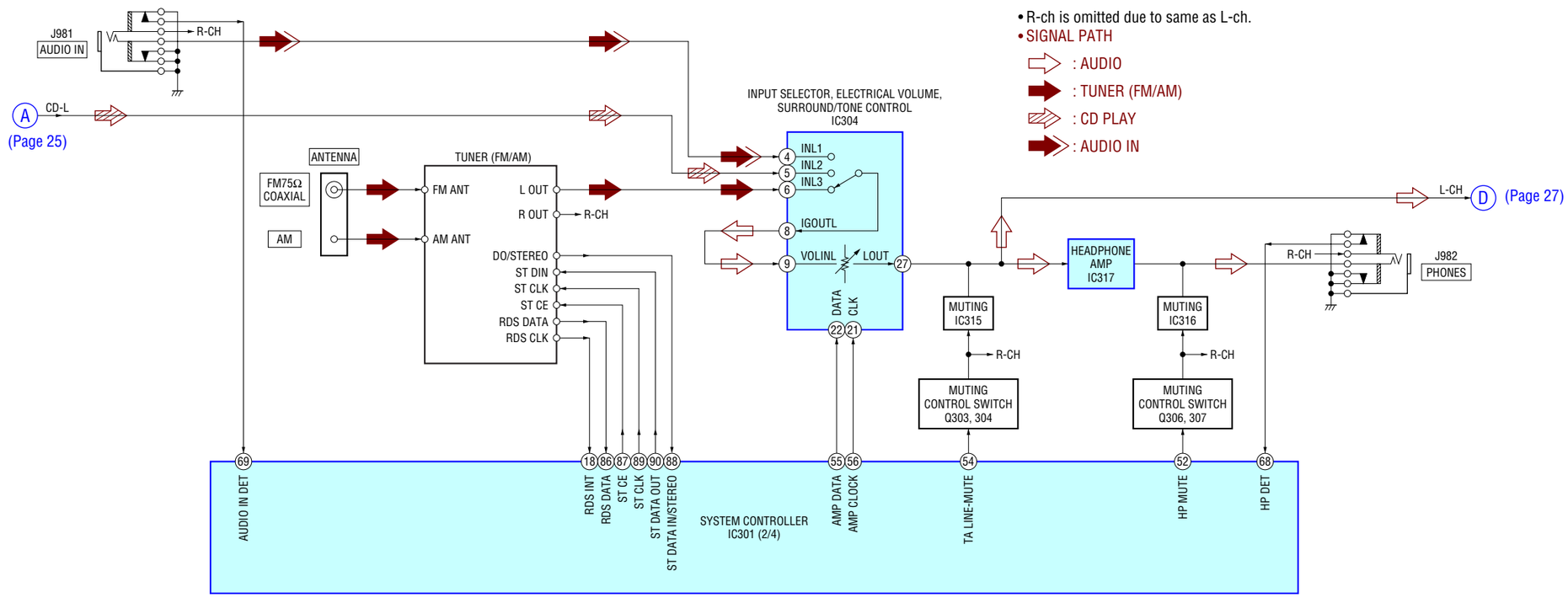
2-6. DIAGRAMS

2-6-1. BLOCK DIAGRAM – CD SERVO Section –

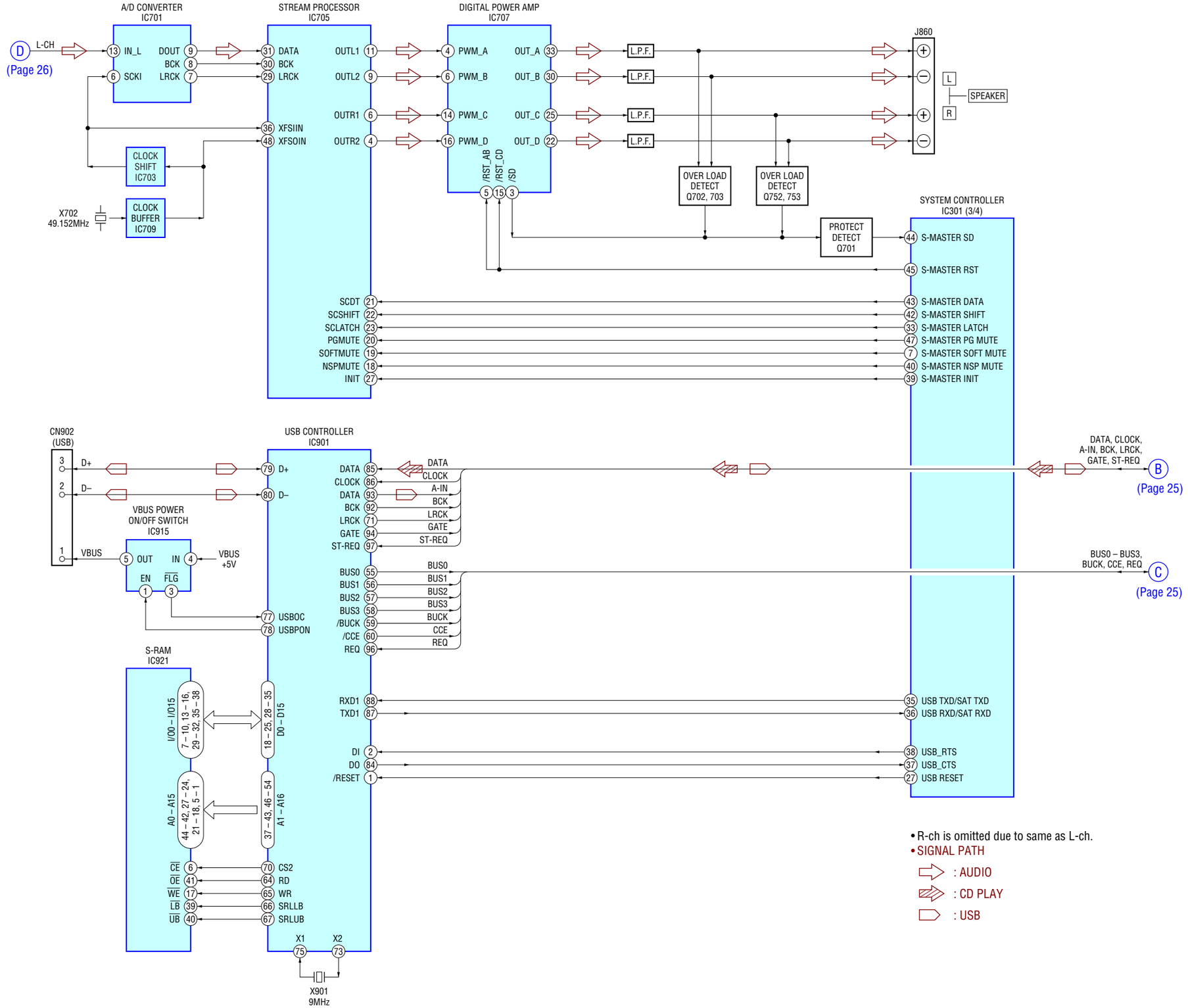


- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : CD PLAY
  - : USB

2-6-2. BLOCK DIAGRAM – MAIN Section –

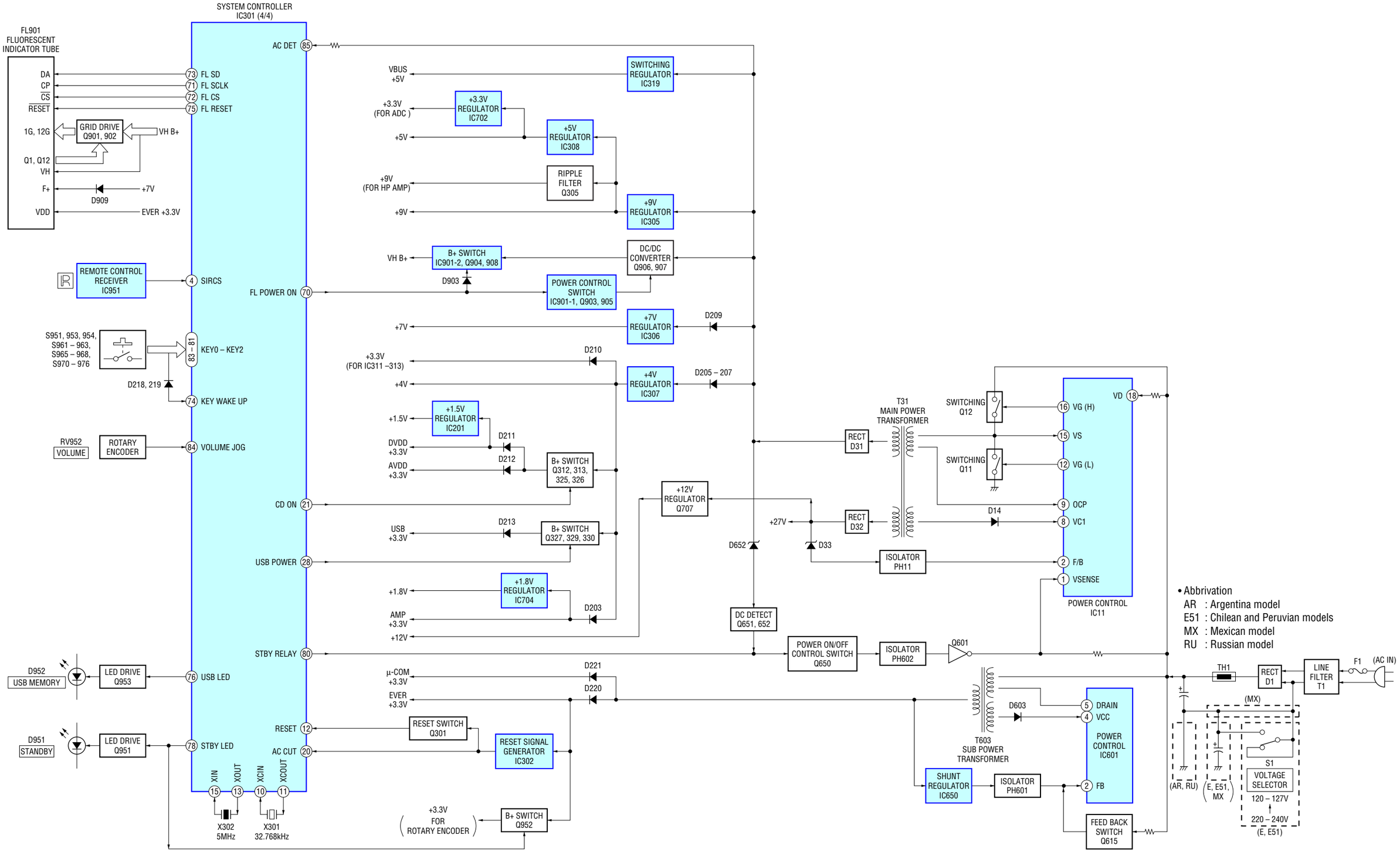


2-6-3. BLOCK DIAGRAM – AMP/USB Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : AUDIO
  - : CD PLAY
  - : USB

2-6-4. BLOCK DIAGRAM – PANEL/POWER SUPPLY Section –



• Note For Printed Wiring Boards and Schematic Diagrams

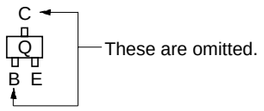
Note on Printed Wiring Board:

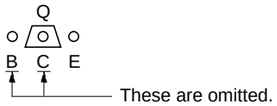
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor





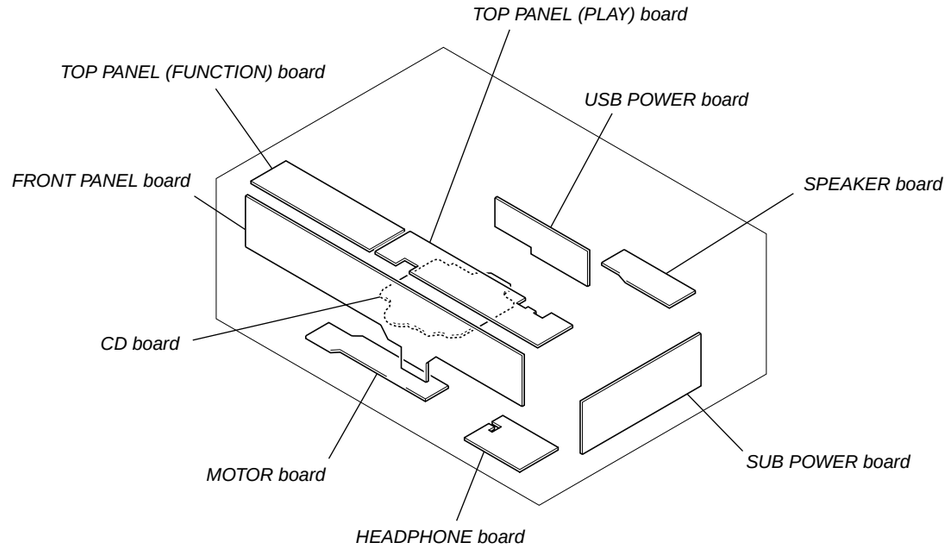
Note on Schematic Diagram:

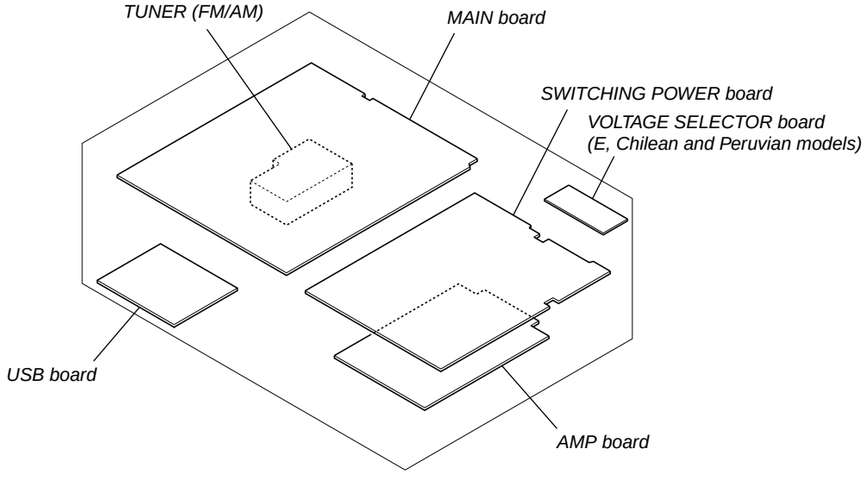
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  – CD Board –
  no mark : CD PLAY
  [ ] : USB
  – USB and USB POWER Boards –
  no mark : USB
  – Other Boards –
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  [ ] : USB
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : AUDIO
  : TUNER (FM/AM)
  : CD PLAY
  : USB
  : AUDIO IN
- Abbreviation
  AR : Argentina model
  E51 : Chilean and Peruvian models
  MX : Mexican model
  RU : Russian model

• Circuit Boards Location



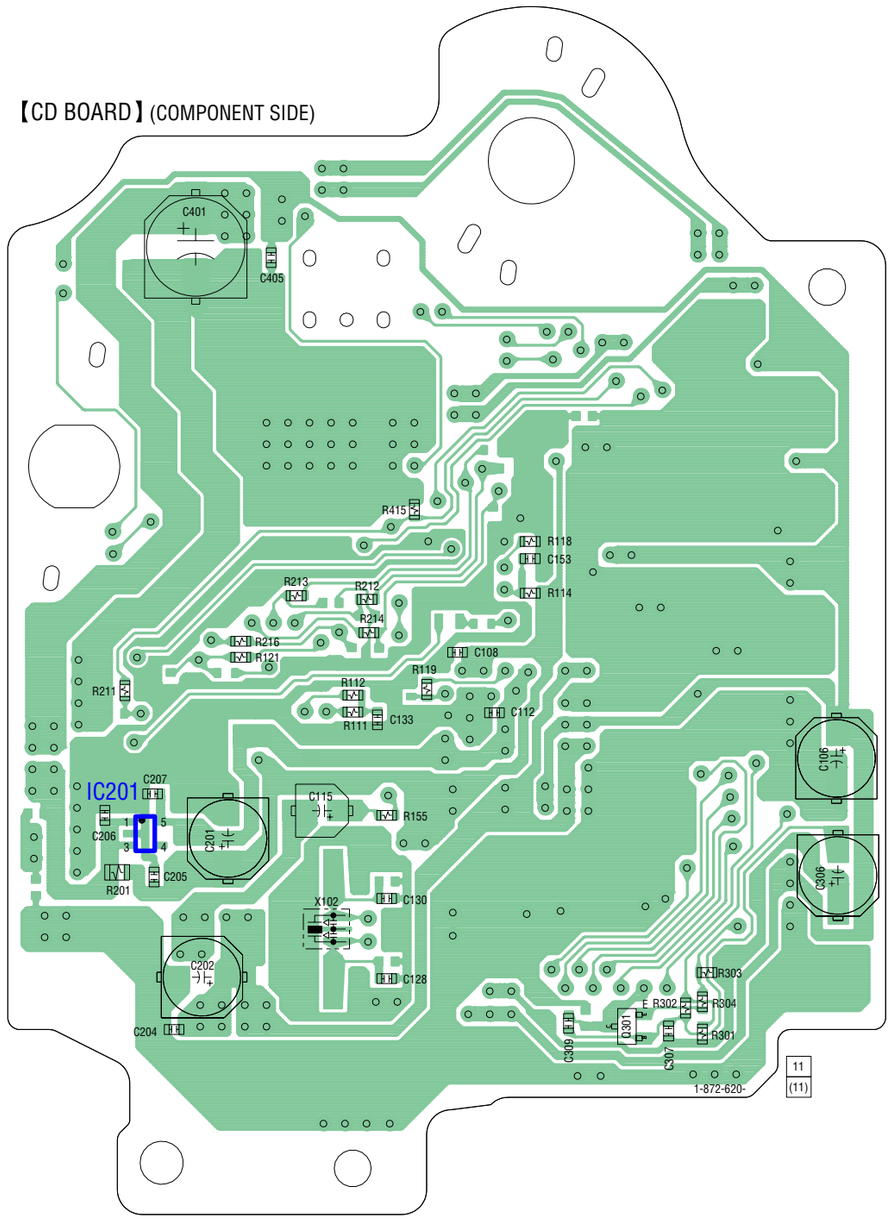


2-6-5. PRINTED WIRING BOARDS – CD Section –

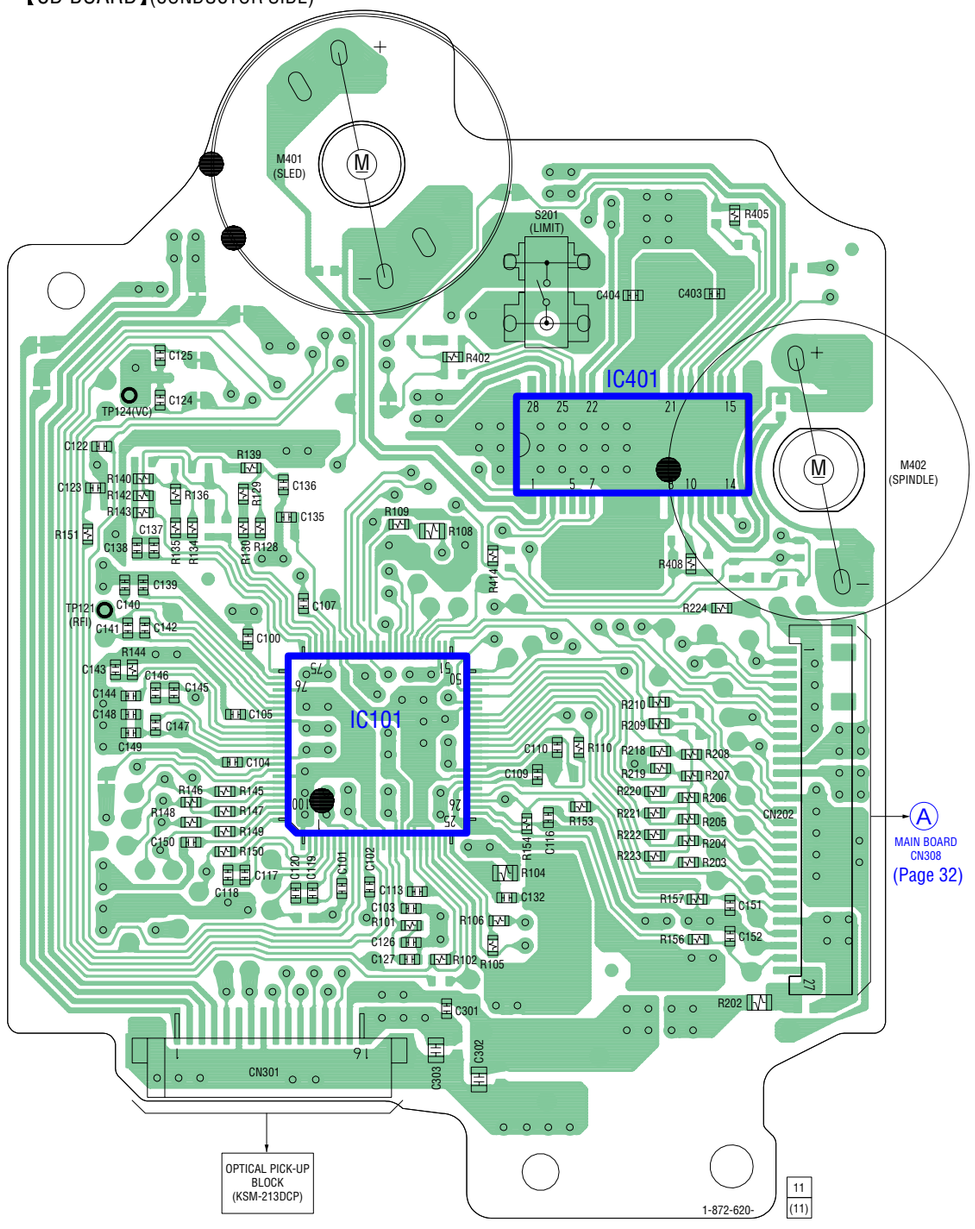
• See page 29 for Circuit Boards Location.

:Uses unleaded solder.

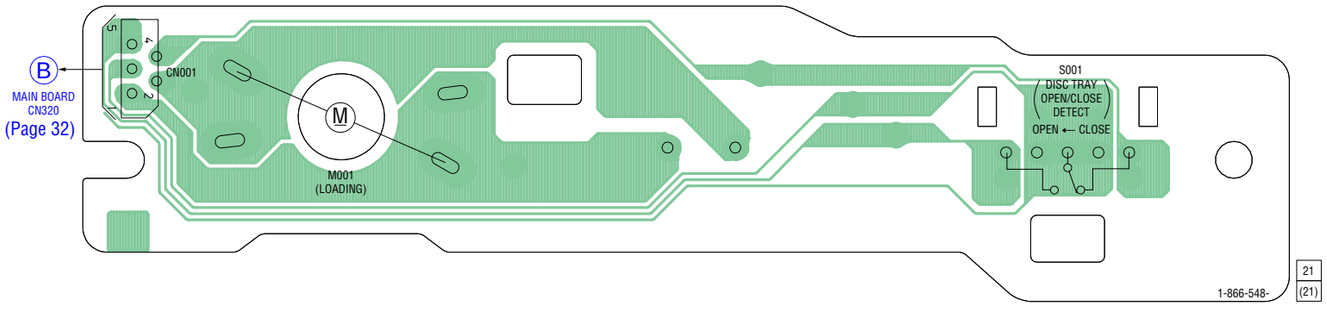
【CD BOARD】(COMPONENT SIDE)



【CD BOARD】(CONDUCTOR SIDE)

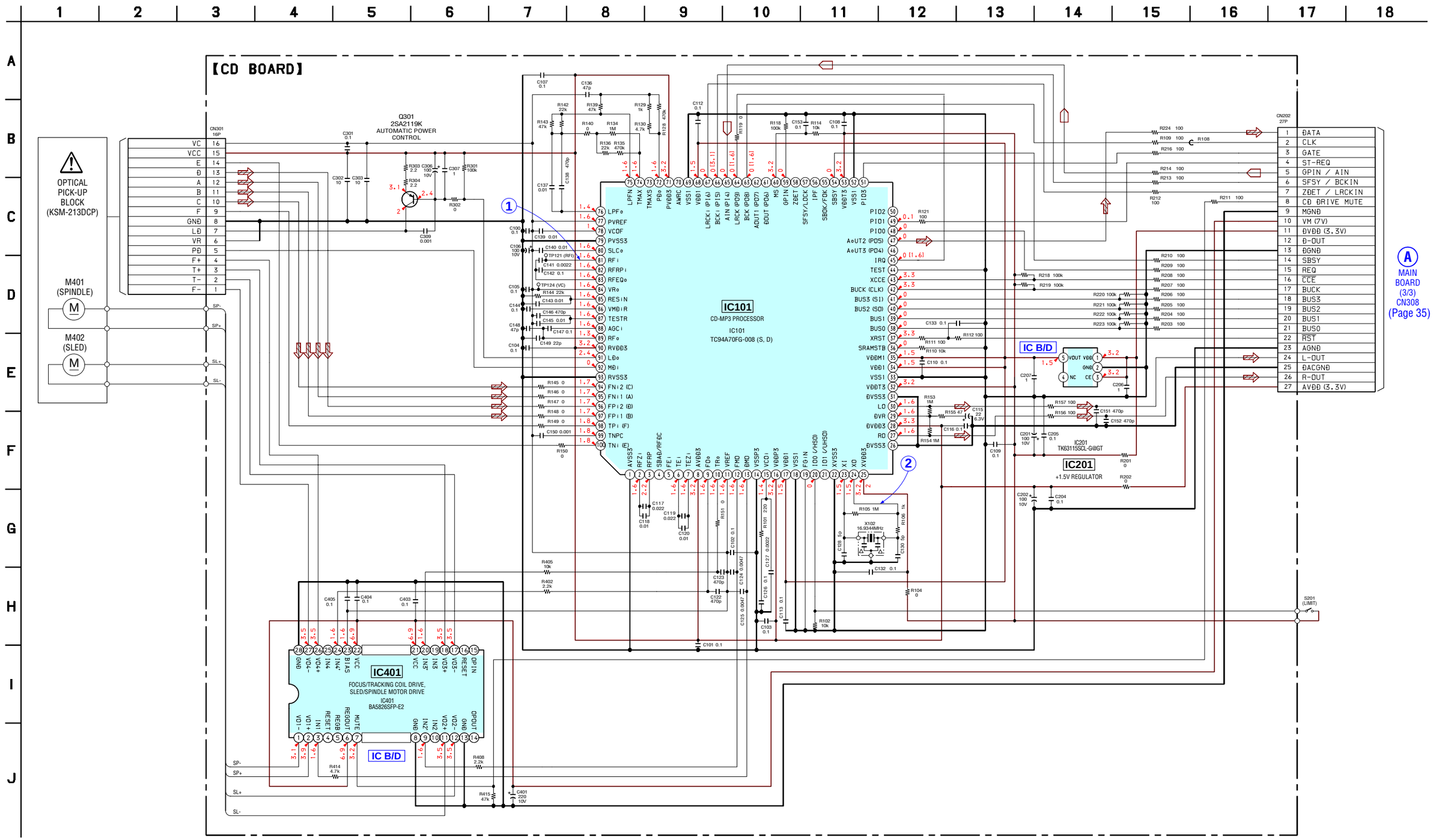


【MOTOR BOARD】



2-6-6. SCHEMATIC DIAGRAM – CD Section –

• See page 39 for Waveforms. • See page 46 for IC Block Diagrams. • See page 51 for IC Pin Function Description.

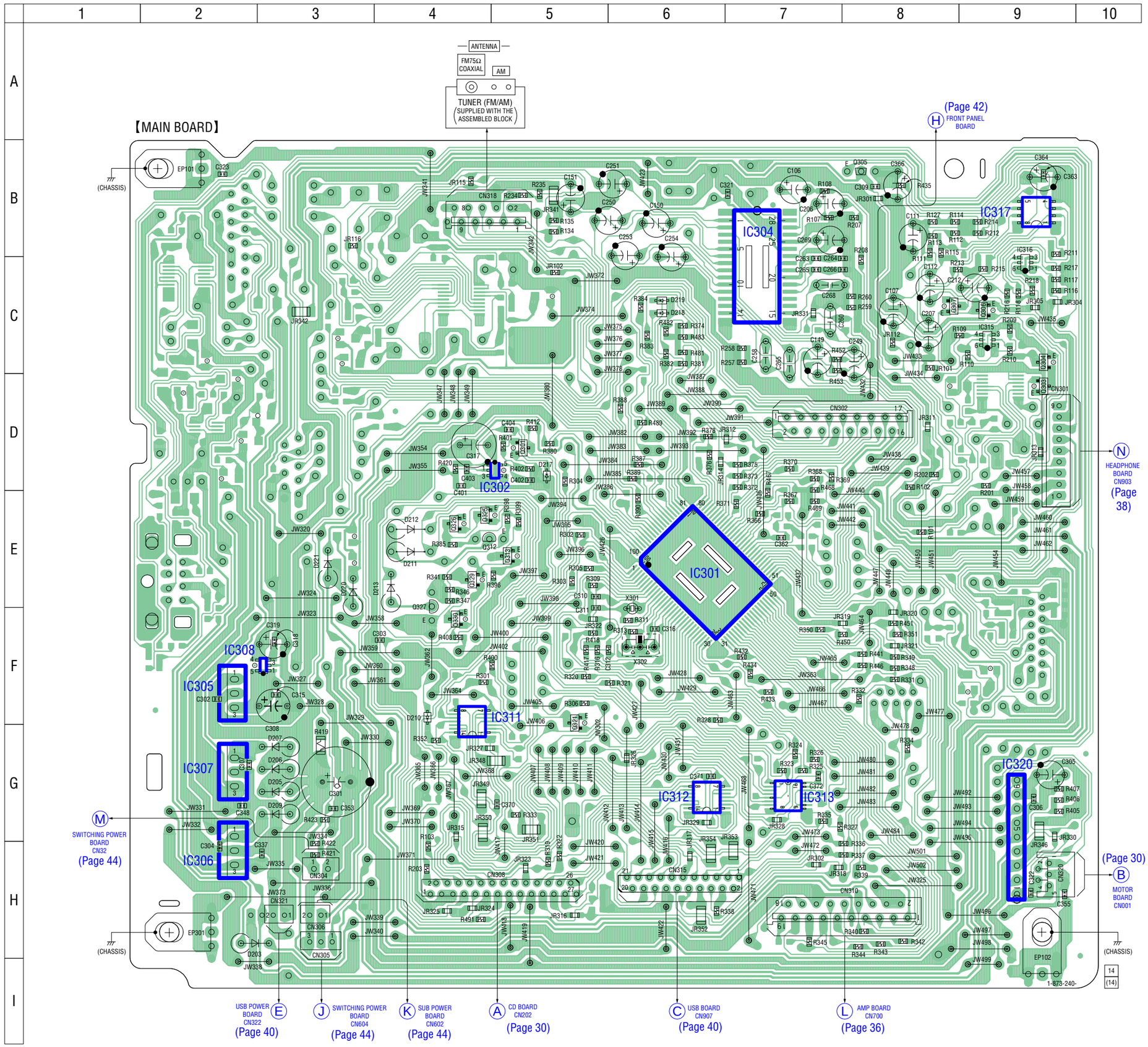


2-6-7. PRINTED WIRING BOARD – MAIN Section –

• See page 29 for Circuit Boards Location. :Uses unleaded solder.

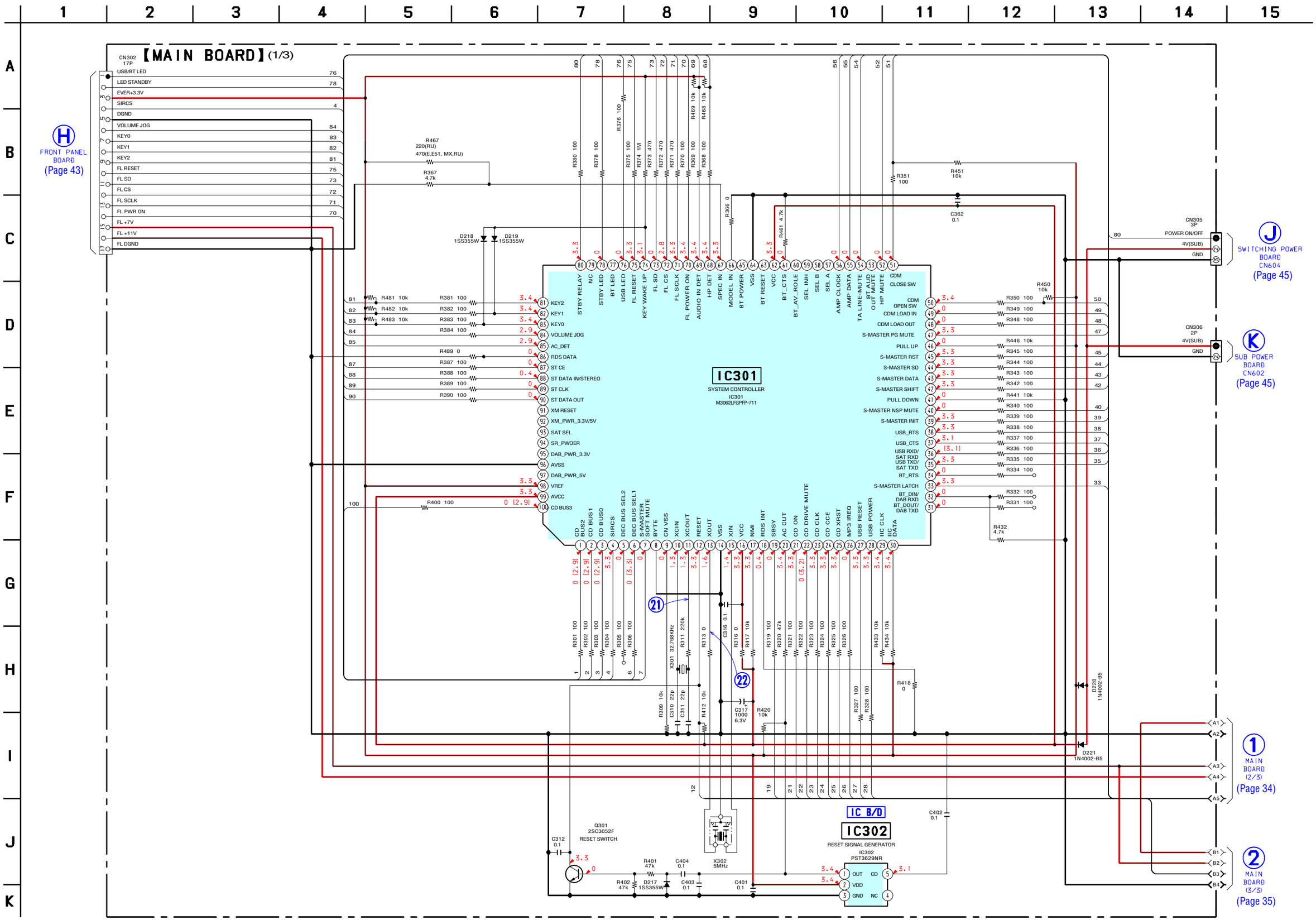
• **Semiconductor Location**

Ref. No.	Location
D203	H-2
D205	G-3
D206	G-3
D207	G-3
D209	G-3
D210	F-4
D211	E-4
D212	E-4
D213	E-4
D217	D-5
D218	C-6
D219	C-6
D220	E-3
D221	E-3
IC301	E-6
IC302	D-5
IC304	C-7
IC305	F-2
IC306	H-2
IC307	G-2
IC308	F-3
IC311	F-4
IC312	G-6
IC313	G-7
IC315	C-9
IC316	C-9
IC317	B-9
IC320	G-9
Q301	D-5
Q303	D-9
Q304	C-9
Q305	B-8
Q306	C-9
Q307	C-8
Q312	E-4
Q313	E-5
Q321	F-5
Q325	E-4
Q326	E-4
Q327	E-4
Q329	E-4
Q330	F-4

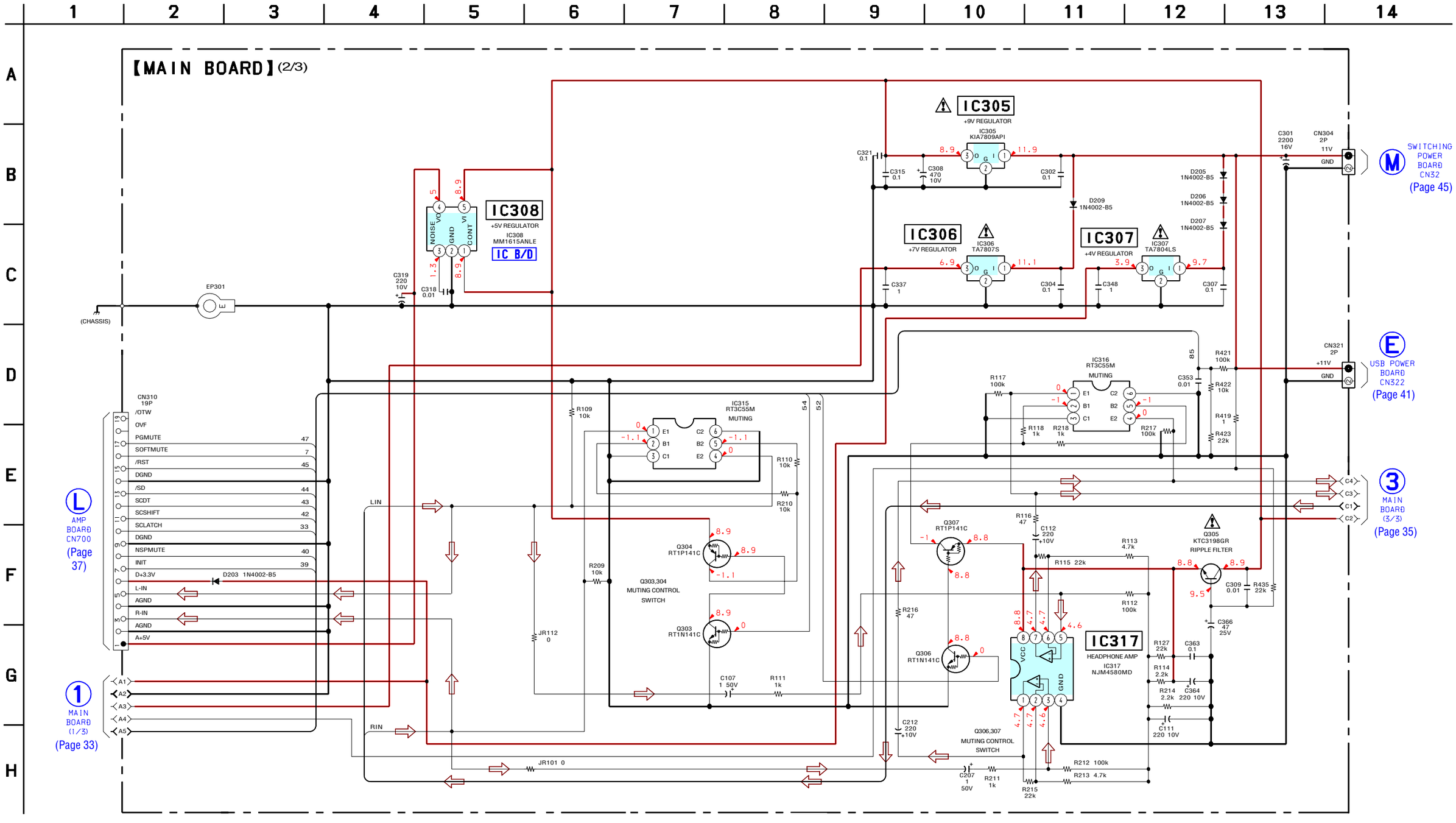


2-6-8. SCHEMATIC DIAGRAM – MAIN Section (1/3) –

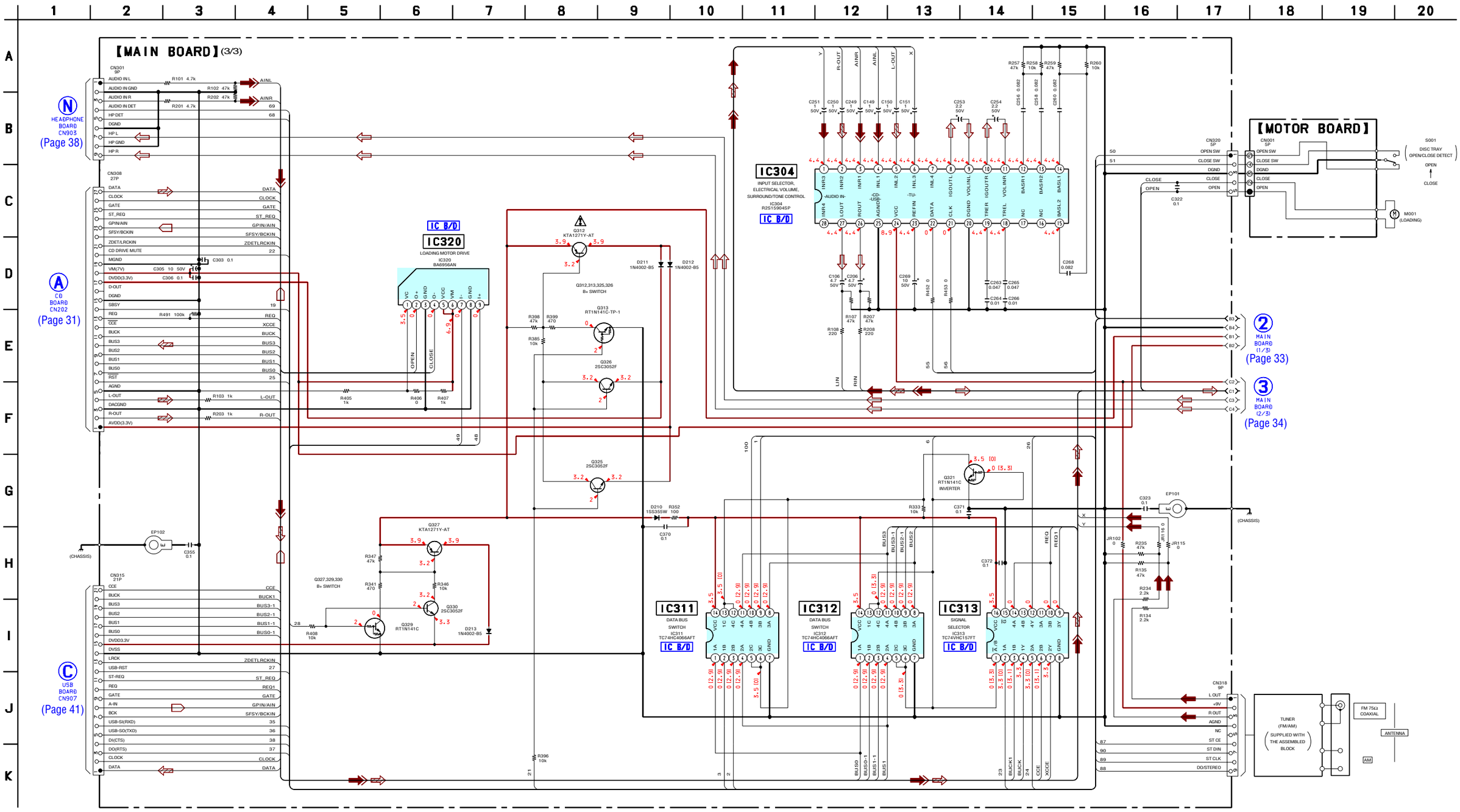
• See page 39 for Waveforms. • See page 46 for IC Block Diagrams. • See page 51 for IC Pin Function Description.



2-6-9. SCHEMATIC DIAGRAM – MAIN Section (2/3) – • See page 46 for IC Block Diagrams.



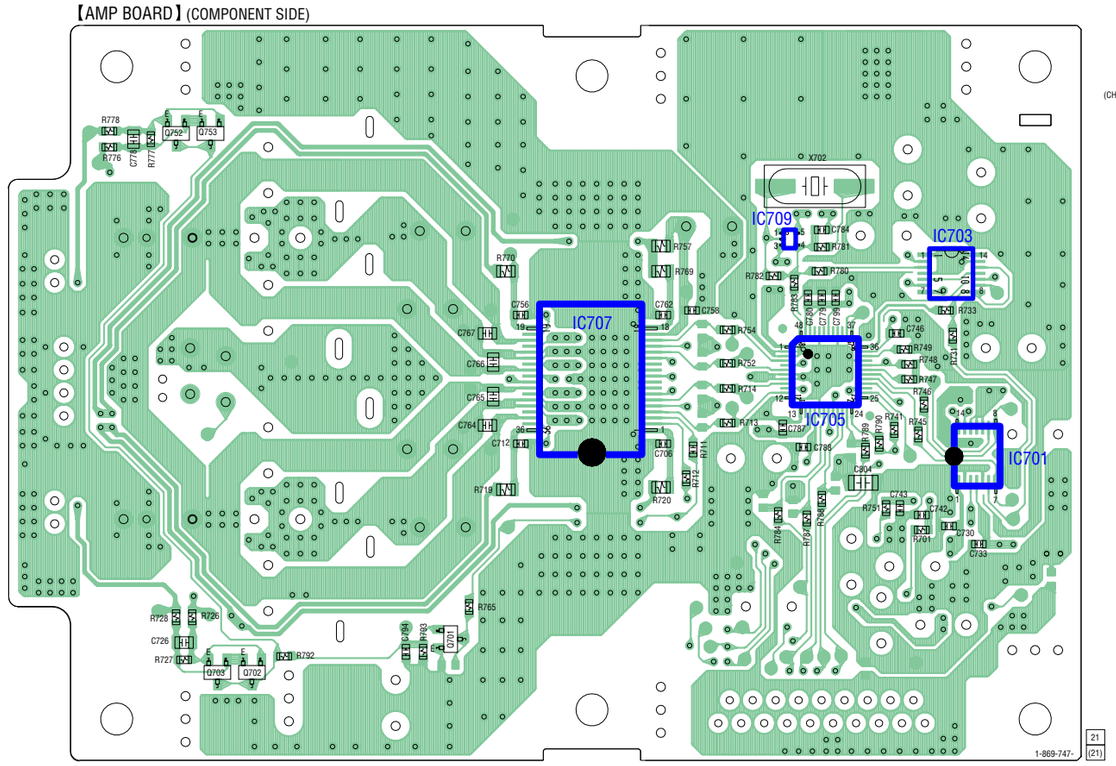
2-6-10. SCHEMATIC DIAGRAM – MAIN Section (3/3) – • See page 46 for IC Block Diagrams.



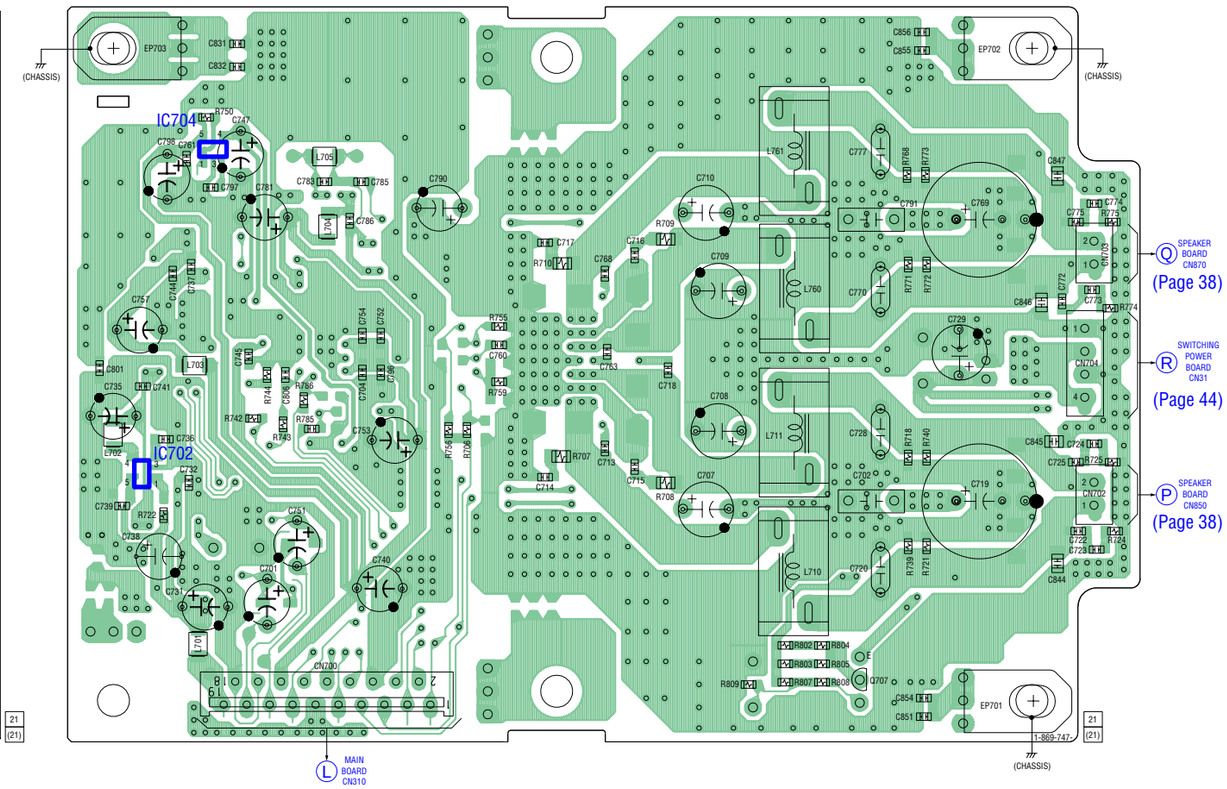
2-6-11. PRINTED WIRING BOARDS – AMP Section –

• See page 29 for Circuit Boards Location. :Uses unleaded solder.

【AMP BOARD】(COMPONENT SIDE)



【AMP BOARD】(CONDUCTOR SIDE)

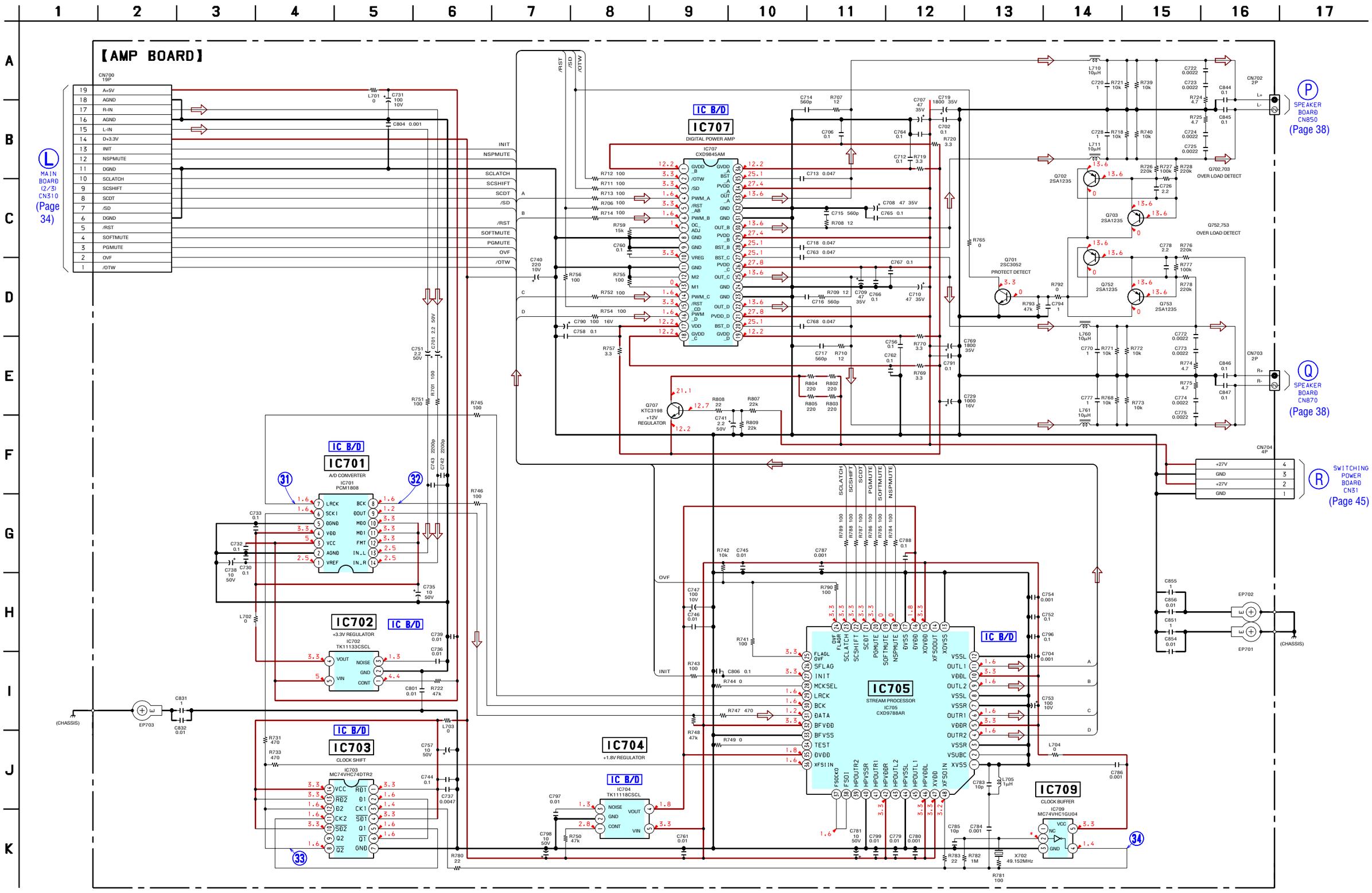


- **Semiconductor Location**

Ref. No.	Location
IC701	D-7
IC702	D-9
IC703	C-7
IC704	B-9
IC705	C-6
IC707	C-5
IC709	B-6
Q701	E-4
Q702	E-2
Q703	E-2
Q707	E-13
Q752	B-2
Q753	B-2

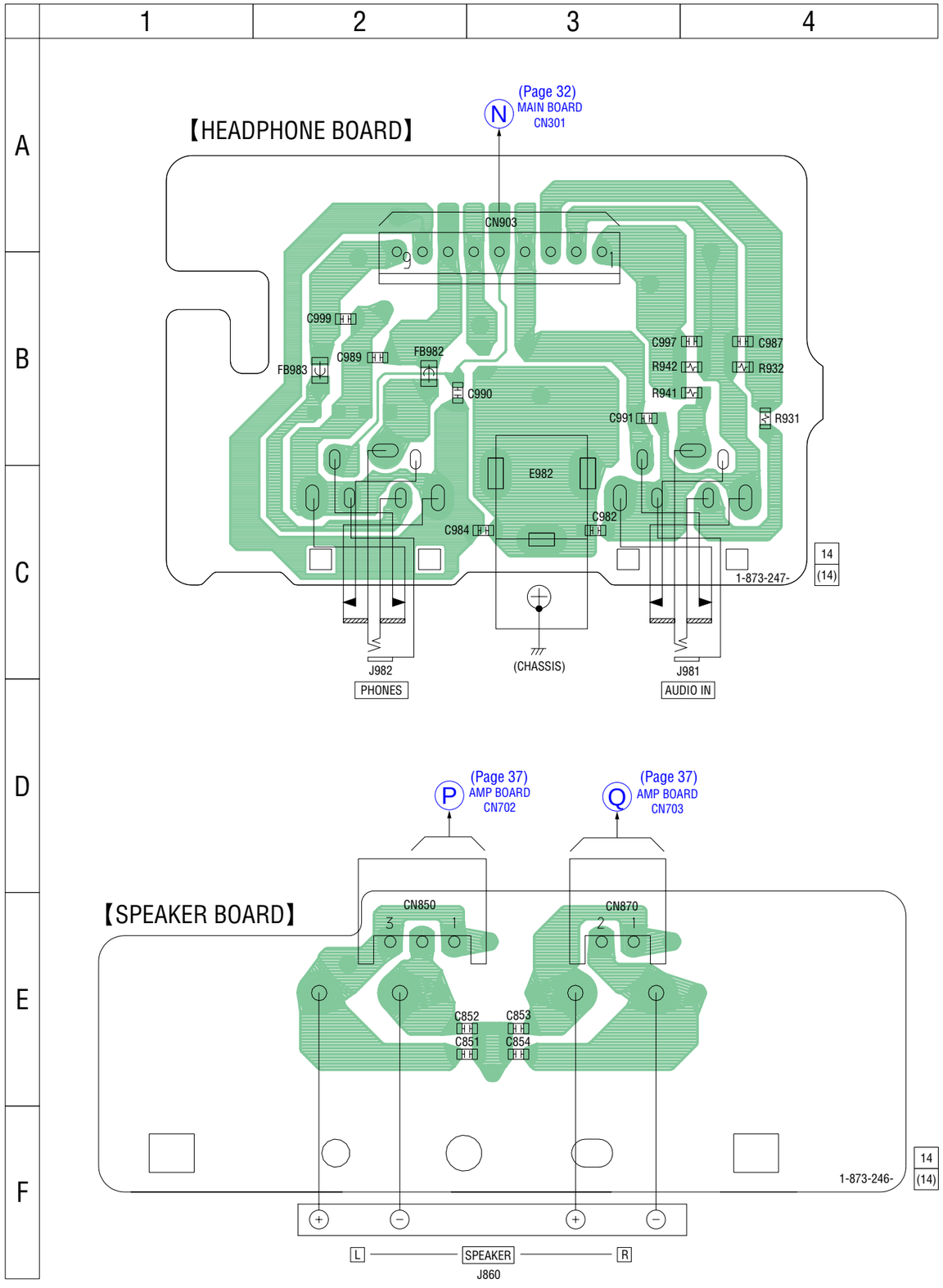
2-6-12. SCHEMATIC DIAGRAM – AMP Section –

• See page 39 for Waveforms. • See page 46 for IC Block Diagrams.

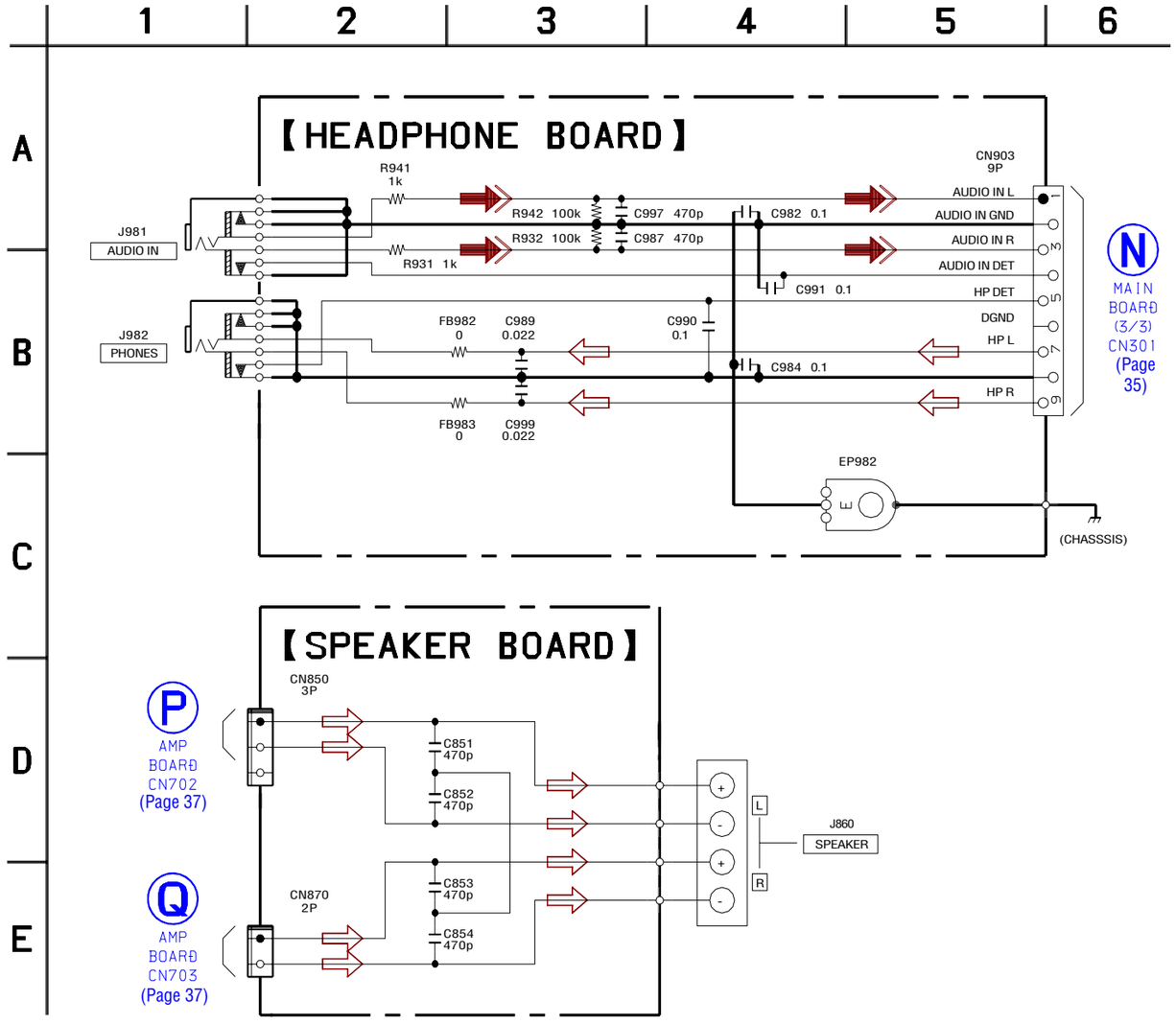


2-6-13. PRINTED WIRING BOARDS – OUTPUT Section –

• See page 29 for Circuit Boards Location. :Uses unleaded solder.



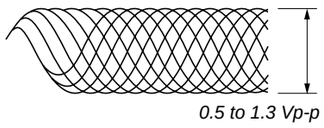
2-6-14. SCHEMATIC DIAGRAM – OUTPUT Section –



• **Waveforms**

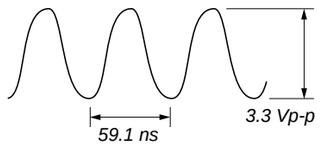
– CD Board –

① IC101 ㉛ (RFi) (CD play mode)



200 mV/DIV, 500 ns/DIV

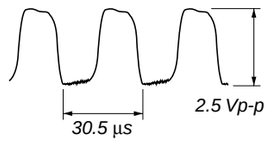
② IC101 ㉔ (XO) (CD play mode)



1 V/DIV, 20 ns/DIV

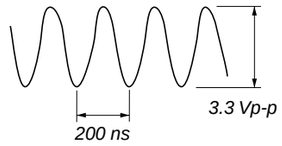
– MAIN Board –

㉑ IC301 ⑪ (XCOUT)



1 V/DIV, 10 µs/DIV

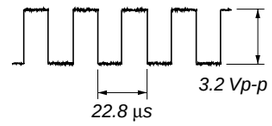
㉒ IC301 ⑬ (XOUT)



1 V/DIV, 100 ns/DIV

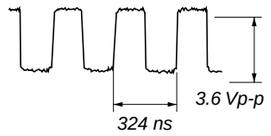
– AMP Board –

㉛ IC701 ⑦ (LRCK)



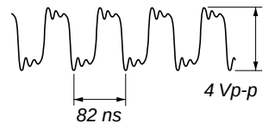
1 V/DIV, 10 µs/DIV

㉜ IC701 ⑧ (BCK)



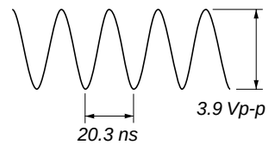
1 V/DIV, 100 ns/DIV

㉝ IC703 ⑧ ($\overline{Q2}$)



1 V/DIV, 50 ns/DIV

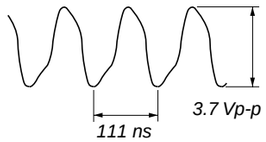
㉞ IC709 ④



1 V/DIV, 10 ns/DIV

– USB Board –

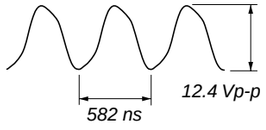
⑪ IC901 ㉝ (X2)



1 V/DIV, 50 ns/DIV

– USB POWER Board –

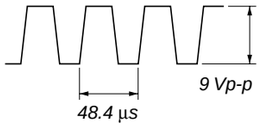
⑫ IC319 ② (SW)



5 V/DIV, 200 ns/DIV

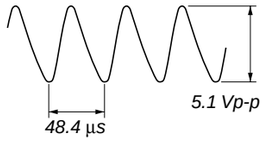
– FRONT PANEL Board –

㊶ IC901 ①



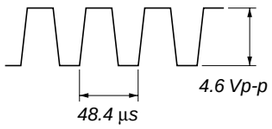
5 V/DIV, 20 µs/DIV

㊷ IC901 ②



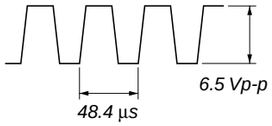
2 V/DIV, 20 µs/DIV

㊸ IC901 ③



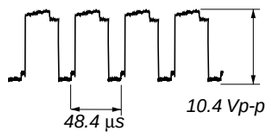
2 V/DIV, 20 µs/DIV

㊹ Q906, 907 (Base)



5 V/DIV, 20 µs/DIV

㊺ Q906, 907 (Collector)

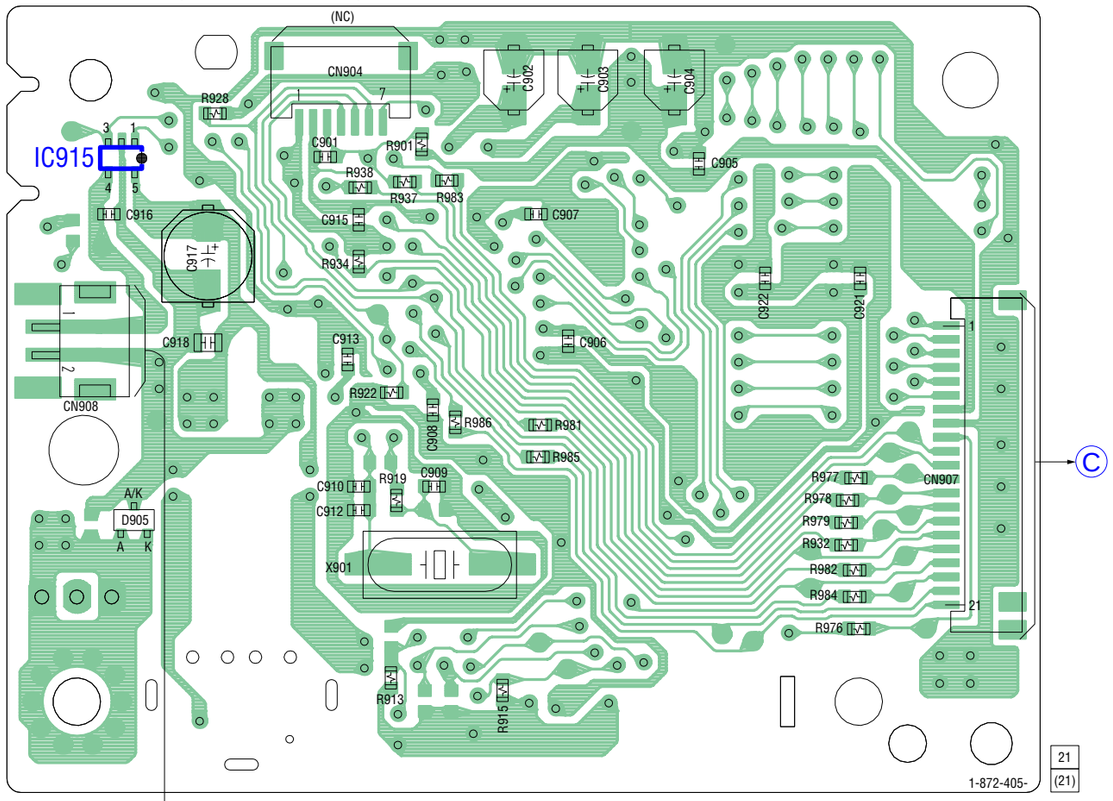


5 V/DIV, 20 µs/DIV

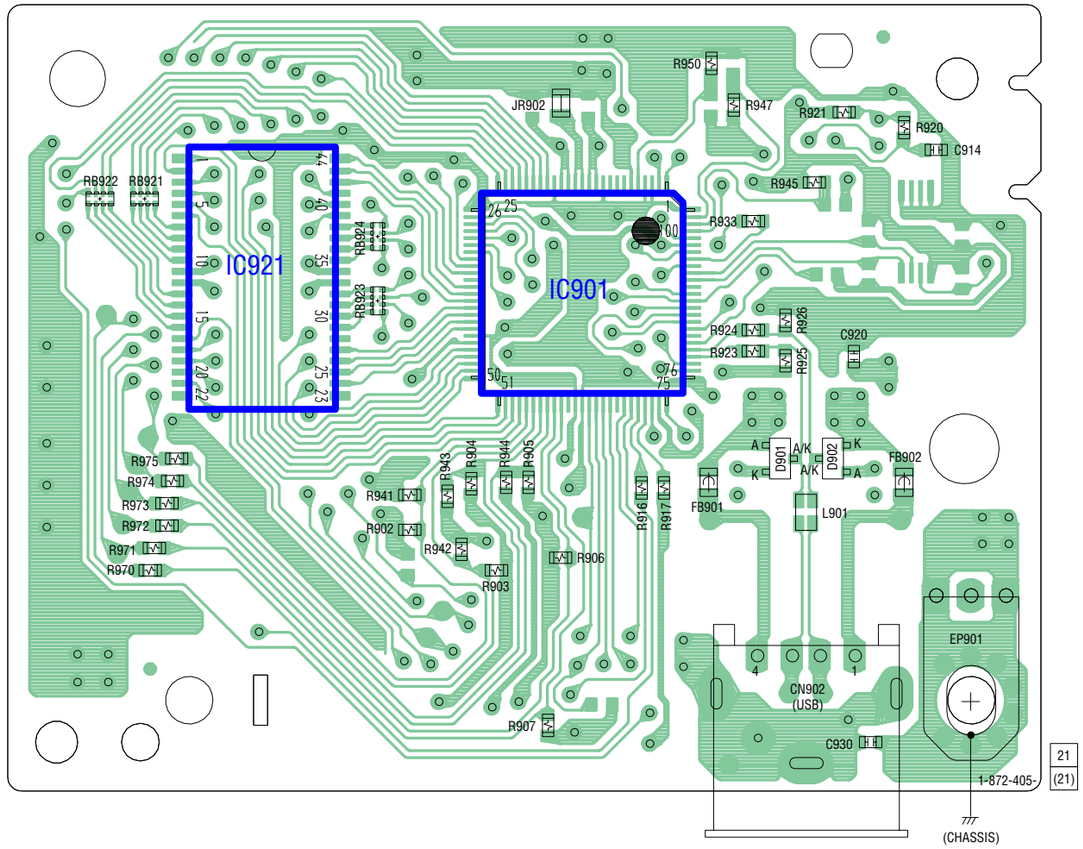
2-6-15. PRINTED WIRING BOARDS – USB Section –

• See page 29 for Circuit Boards Location. :Uses unleaded solder.

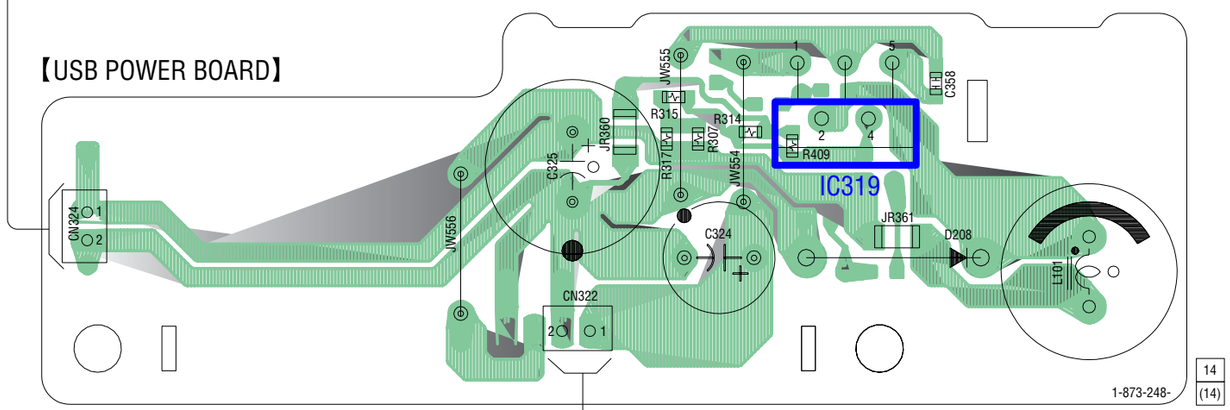
【USB BOARD】(COMPONENT SIDE)



【USB BOARD】(CONDUCTOR SIDE)



【USB POWER BOARD】



Ⓒ MAIN BOARD CN307 (Page 32)

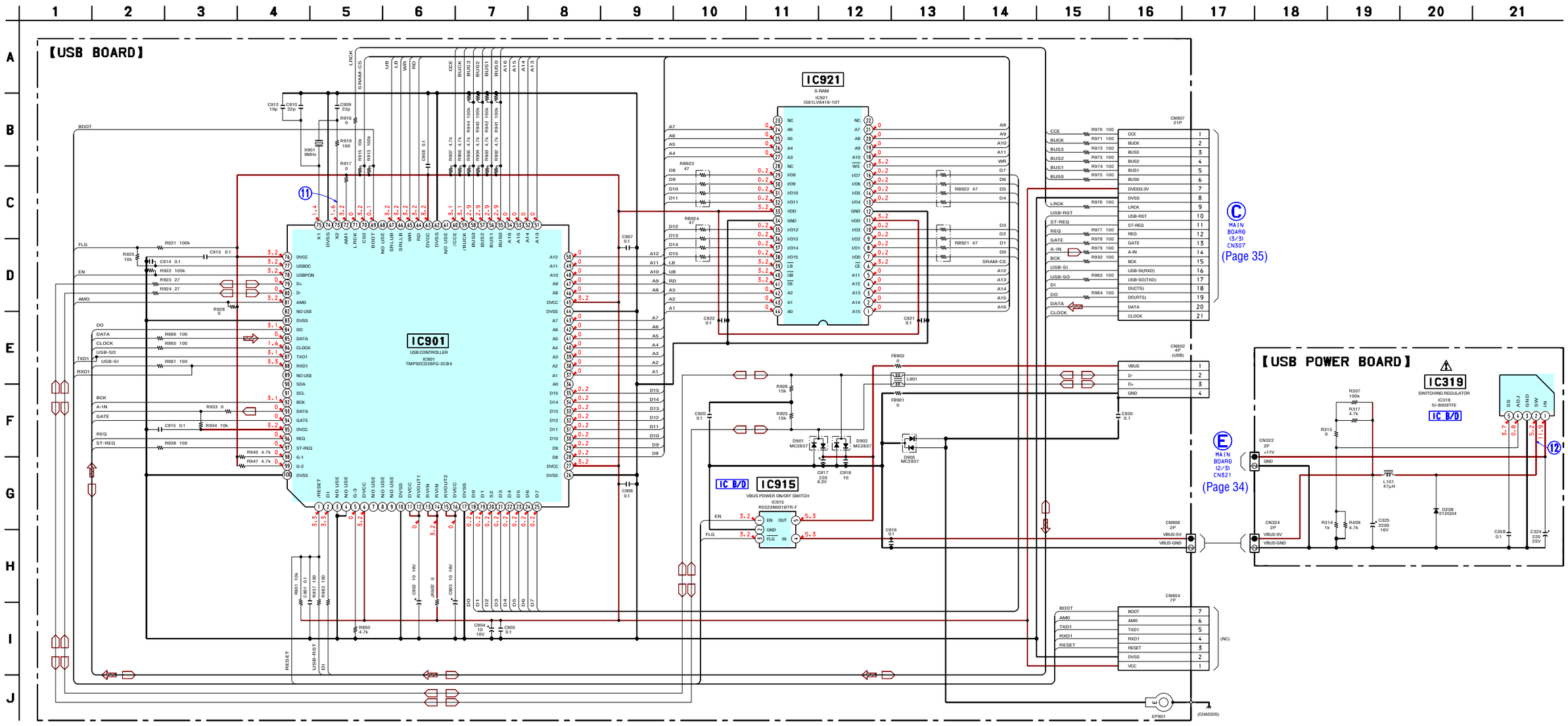
Ⓔ MAIN BOARD CN321 (Page 32)

- **Semiconductor Location**

Ref. No.	Location
D208	F-6
D901	C-9
D902	C-10
D905	C-1
IC319	E-5
IC901	B-8
IC915	B-1
IC921	B-7

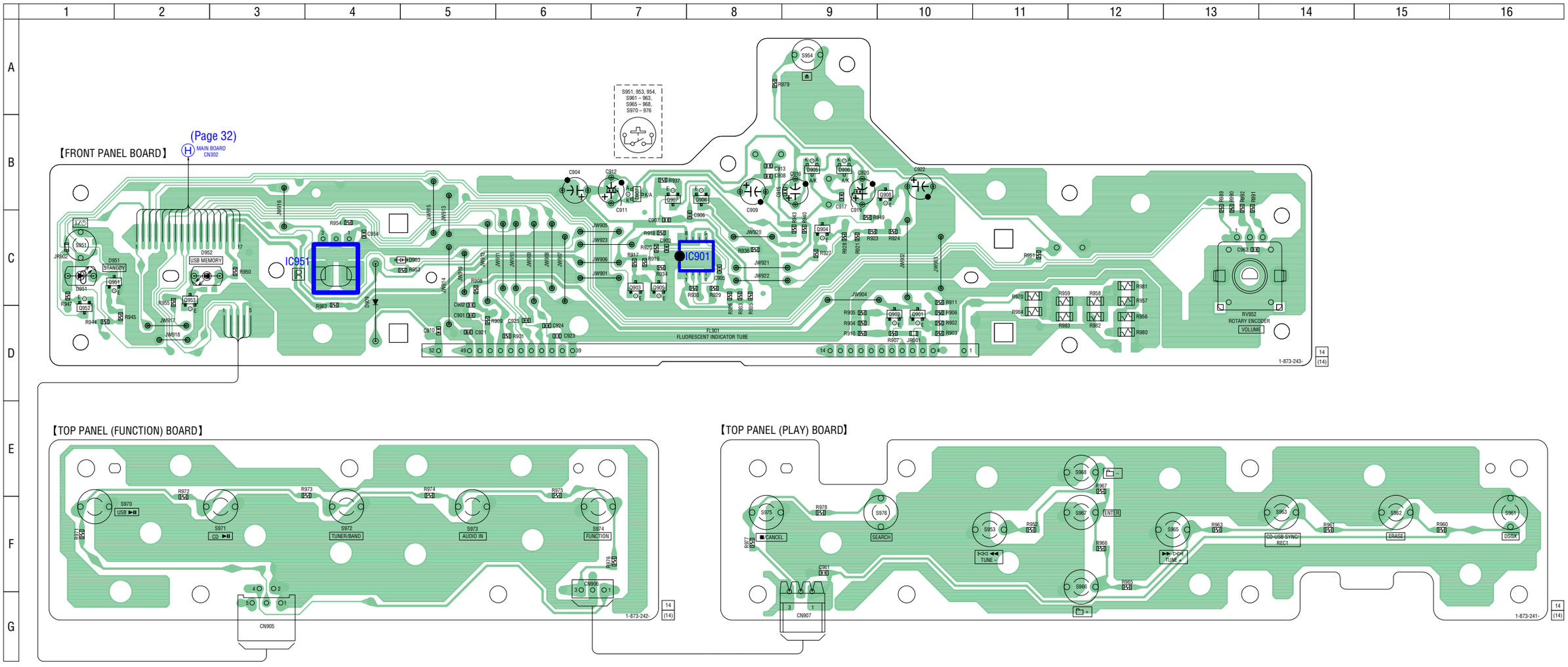
2-6-16. SCHEMATIC DIAGRAM – USB Section –

• See page 39 for Waveforms. • See page 46 for IC Block Diagrams. • See page 51 for IC Pin Function Description.



2-6-17. PRINTED WIRING BOARDS – PANEL Section –

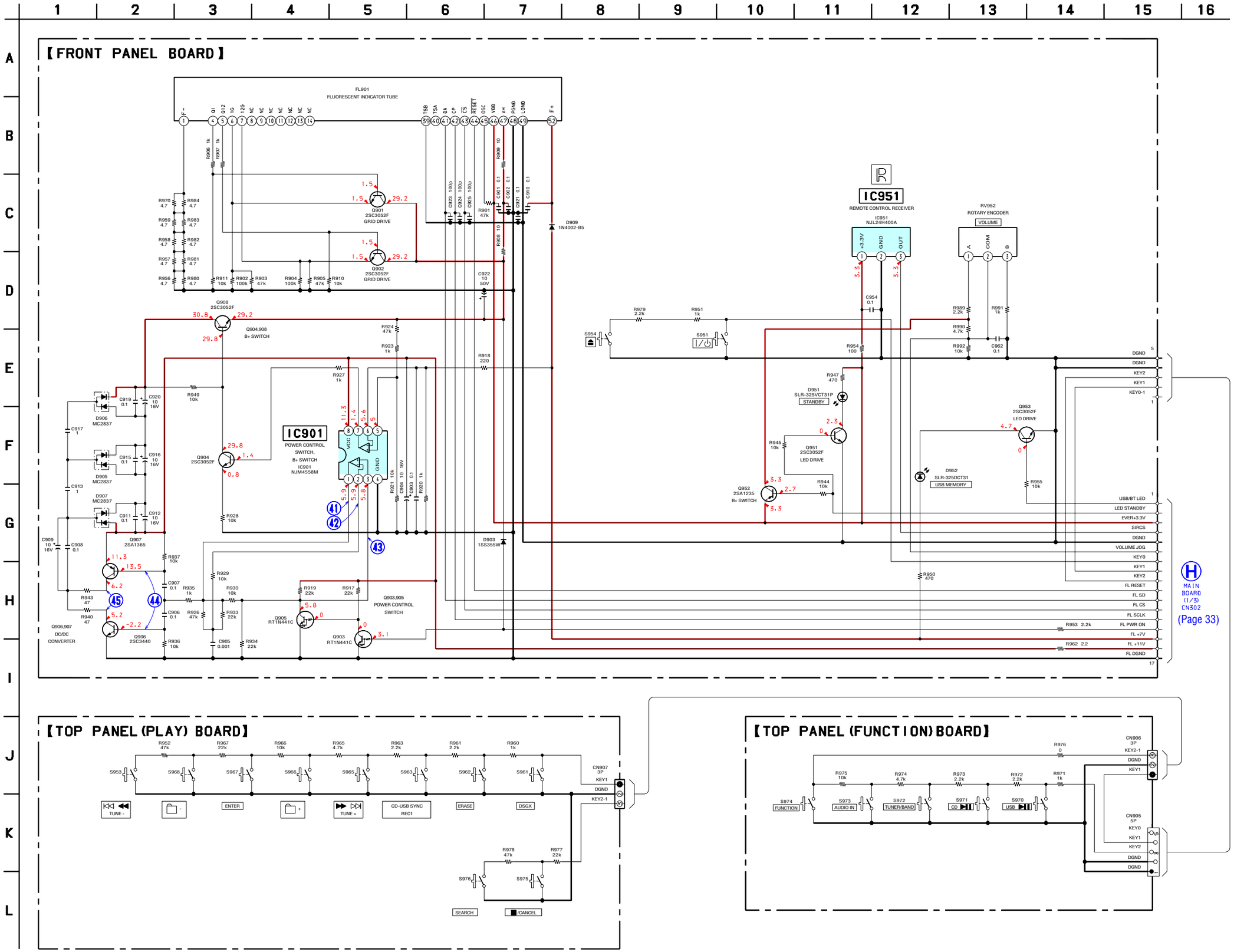
• See page 29 for Circuit Boards Location. :Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D903	C-5	Q901	D-10
D905	B-9	Q902	D-10
D906	B-9	Q903	C-7
D907	B-7	Q904	C-9
D909	C-4	Q905	C-7
D951	C-1	Q906	B-8
D952	C-2	Q907	B-7
		Q908	B-10
IC901	C-8	Q951	C-2
IC951	C-4	Q952	D-1
		Q953	C-2

2-6-18. SCHEMATIC DIAGRAM – PANEL Section – • See page 39 for Waveforms. • See page 46 for IC Block Diagrams.



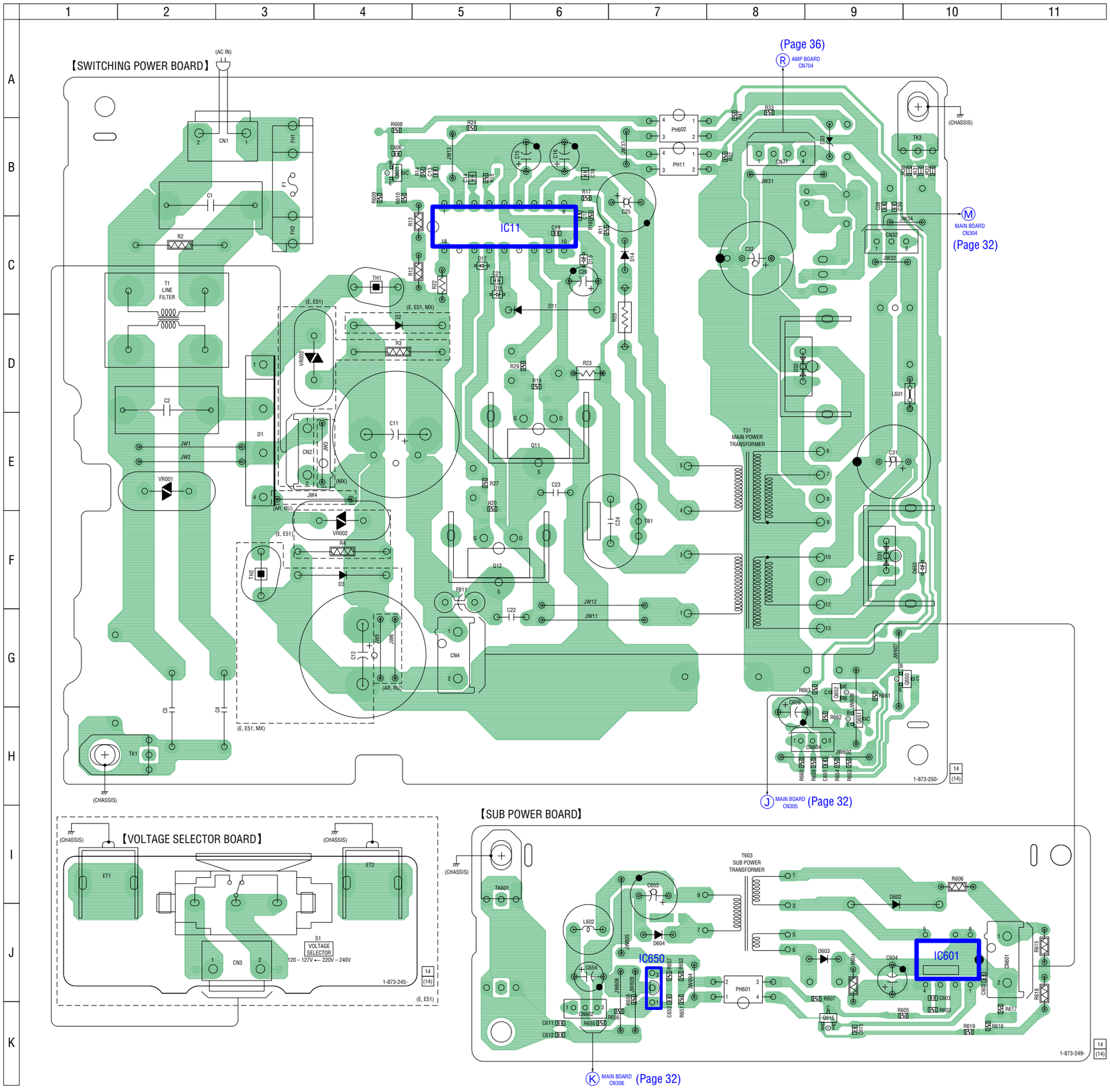
2-6-19. PRINTED WIRING BOARDS – POWER SUPPLY Section –

• See page 29 for Circuit Boards Location.

:Uses unleaded solder.

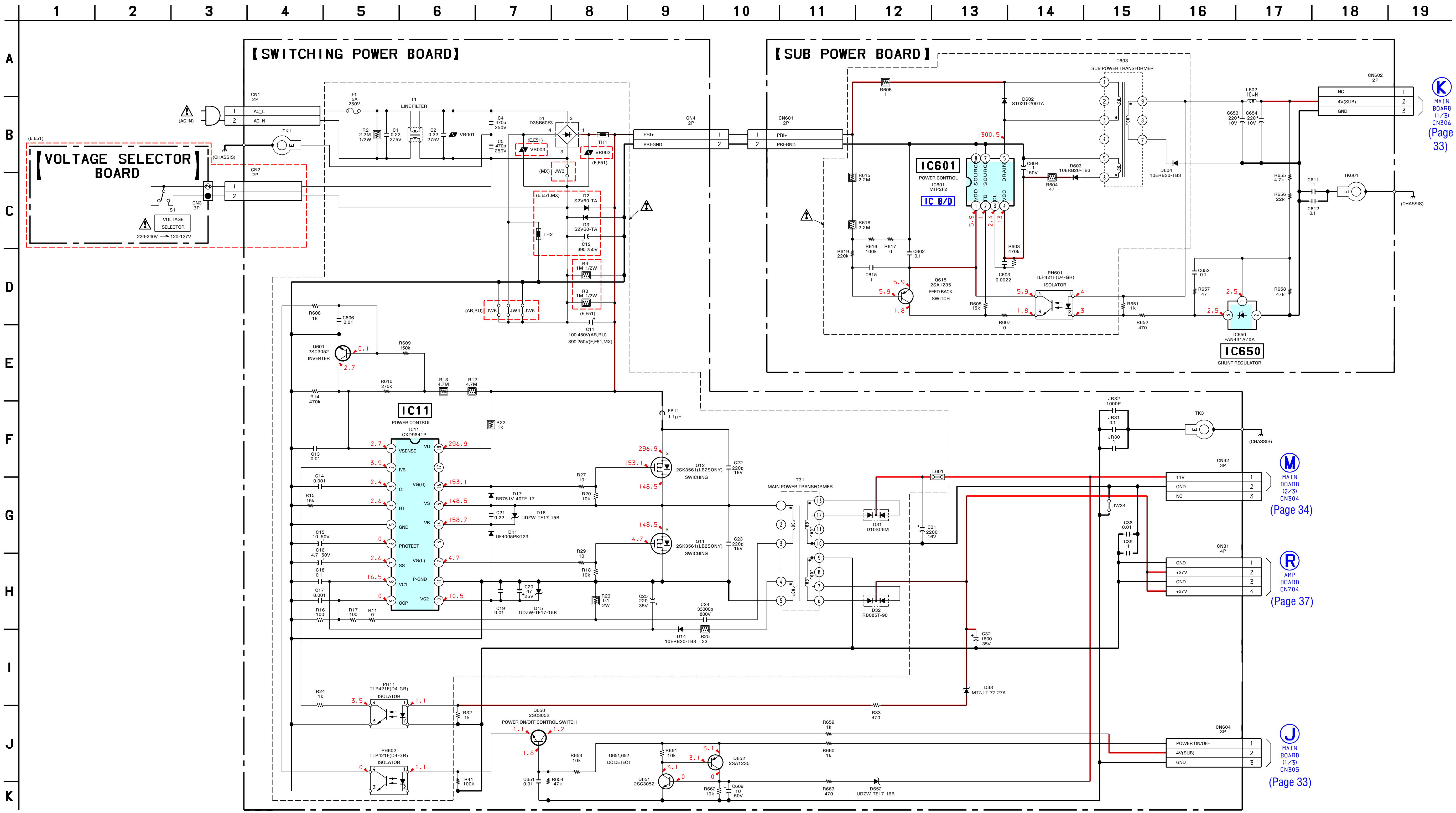
• **Semiconductor Location**

Ref. No.	Location
D1	E-3
D2	D-4
D3	F-4
D11	C-6
D14	C-7
D15	C-6
D16	C-5
D17	C-5
D31	F-9
D32	D-8
D33	B-9
D602	J-9
D603	J-9
D604	J-7
D652	F-10
IC11	C-5
IC601	J-10
IC650	J-7
PH11	B-7
PH601	J-8
PH602	B-7
Q11	E-6
Q12	F-5
Q601	B-4
Q615	K-9
Q650	G-10
Q651	H-9
Q652	G-9



2-6-20. SCHEMATIC DIAGRAM – POWER SUPPLY Section –

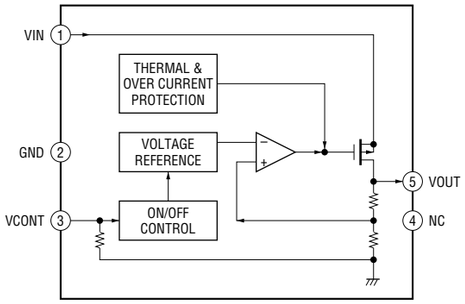
• See page 46 for IC Block Diagrams. • See page 51 for IC Pin Function Description.



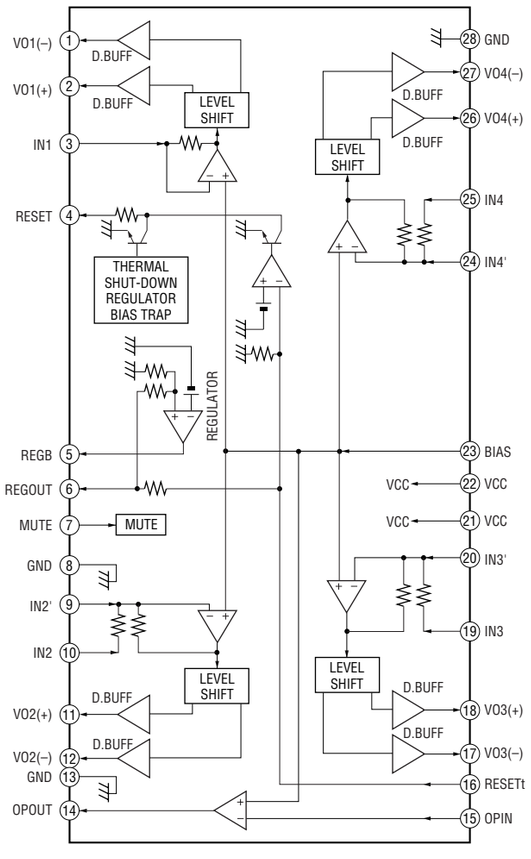
- **IC Block Diagrams**

– CD Board –

IC201 TK63115SCL-G@GT

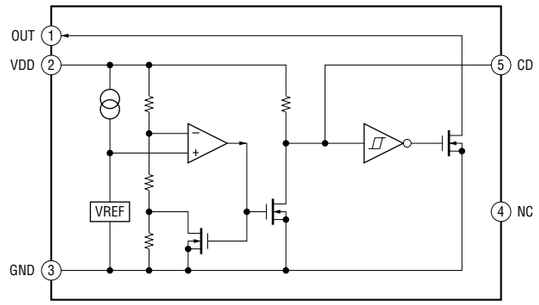


IC401 BA5826SFP-E2

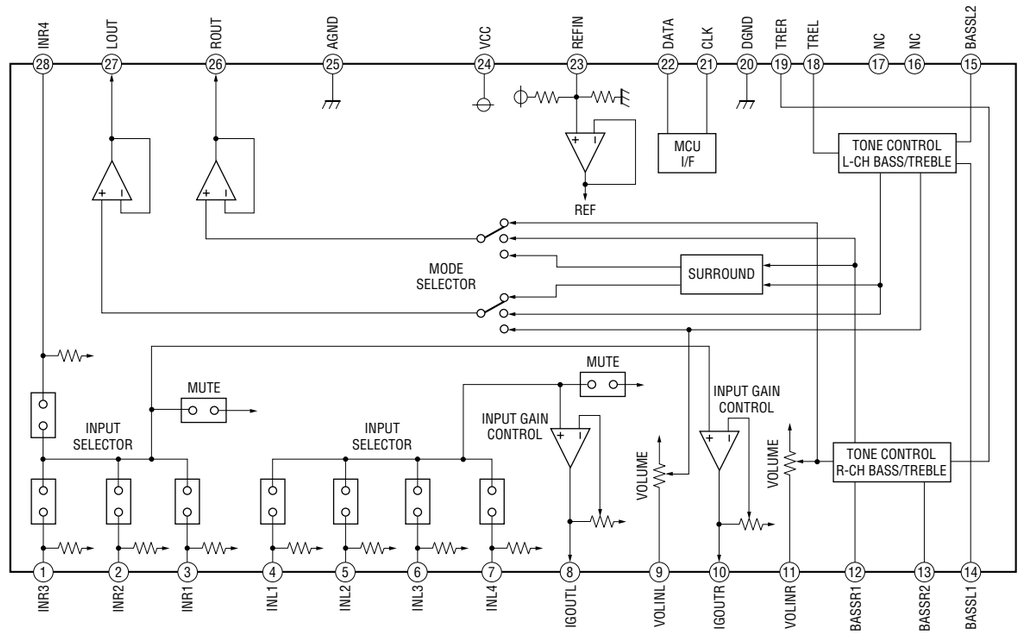


– MAIN Board –

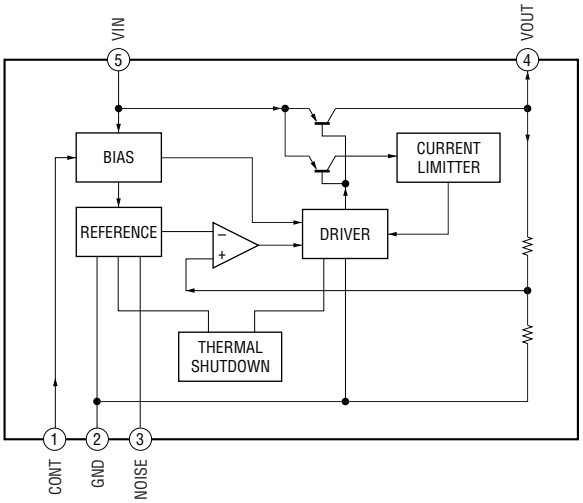
IC302 PST3629NR



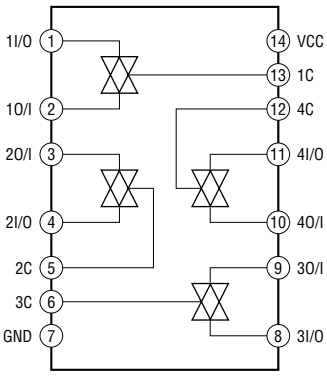
IC304 R2S15904SP



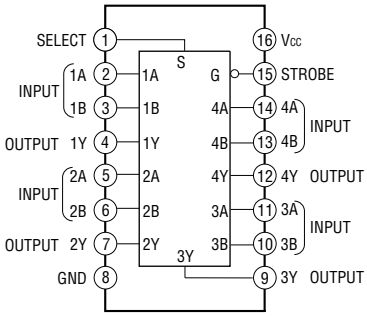
IC308 MM1615ANLE



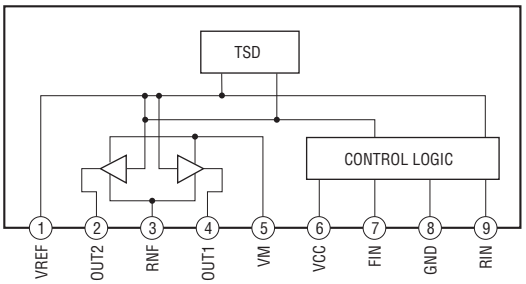
IC311, 312 TC74HC4066AFT (EL)



IC313 TC74VHC157FT (EKJ)

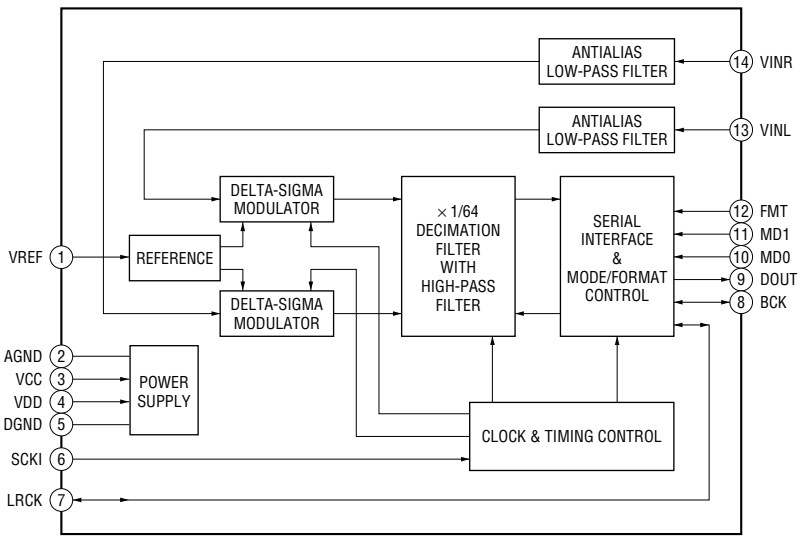


IC320 BA6956AN

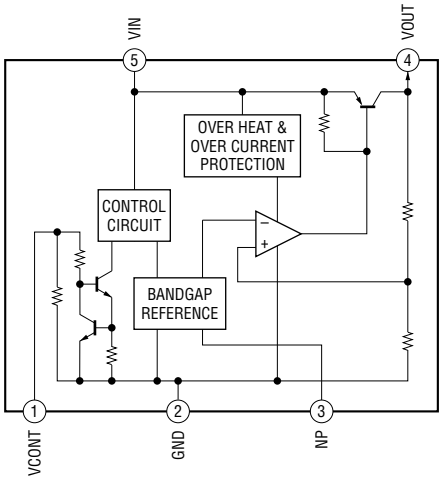


– AMP Board –

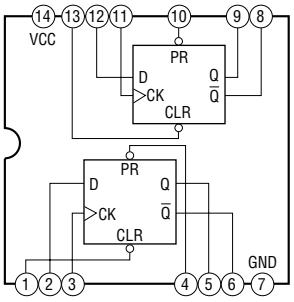
IC701 PCM1808PWR



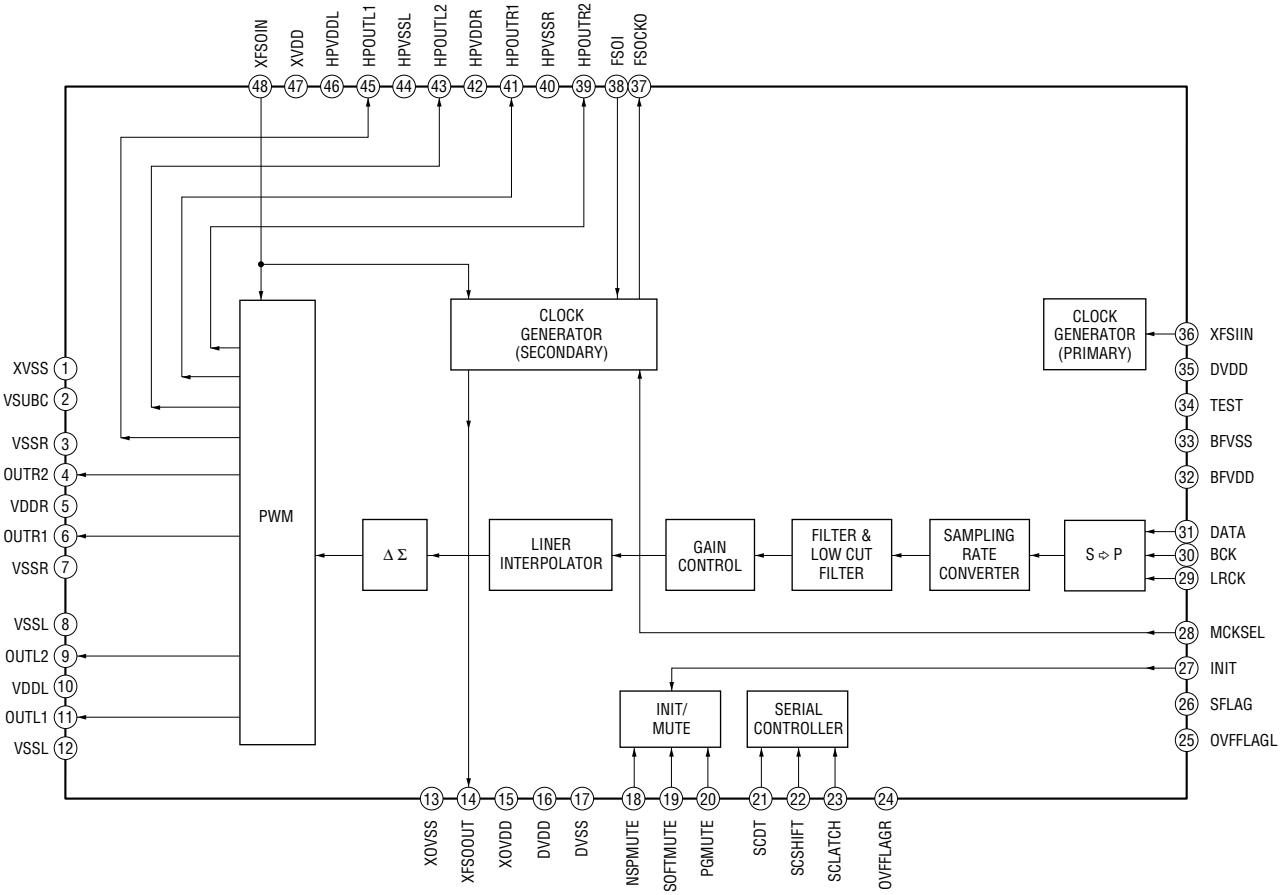
IC702 TK11133CSCL-G
IC704 TK11118CSCL-G



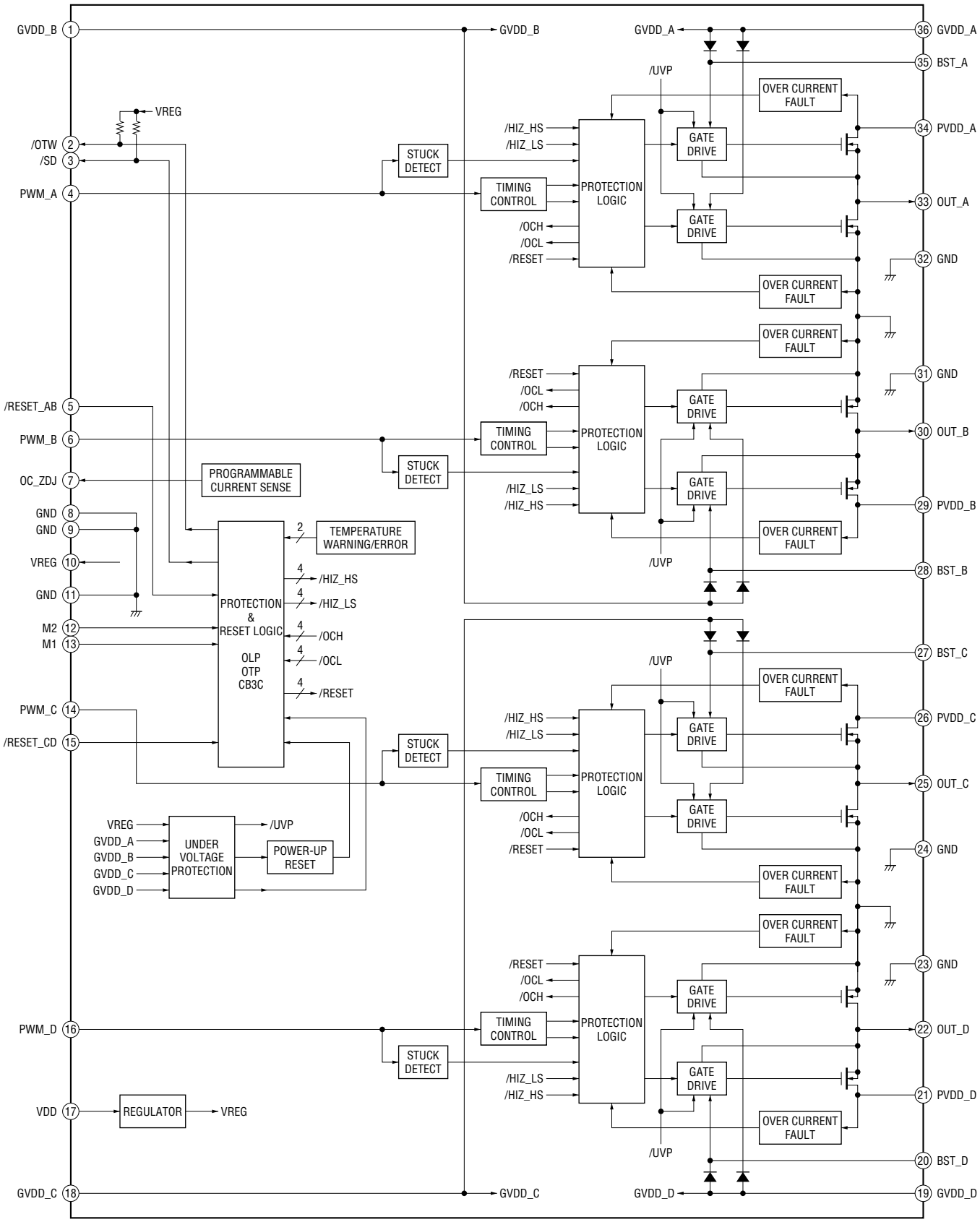
IC703 MC74VHC74DTR2



IC705 CXD9788AR

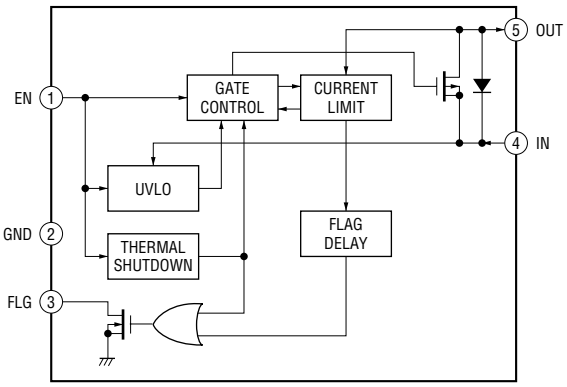


IC707 CXD9845AM



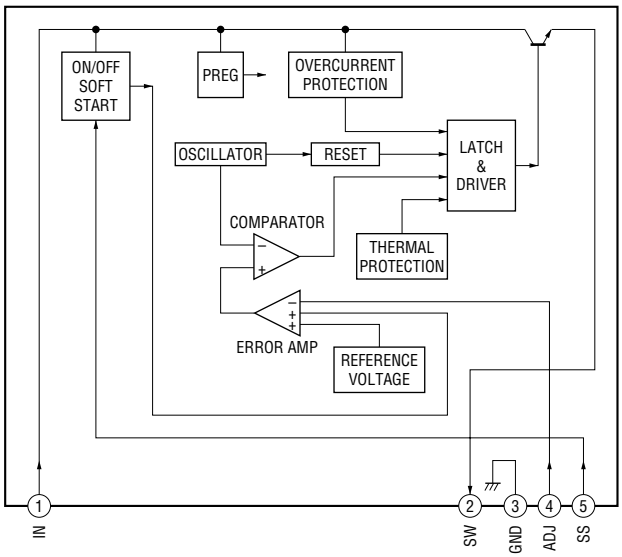
– USB Board –

IC915 R5523N001B-TR-F



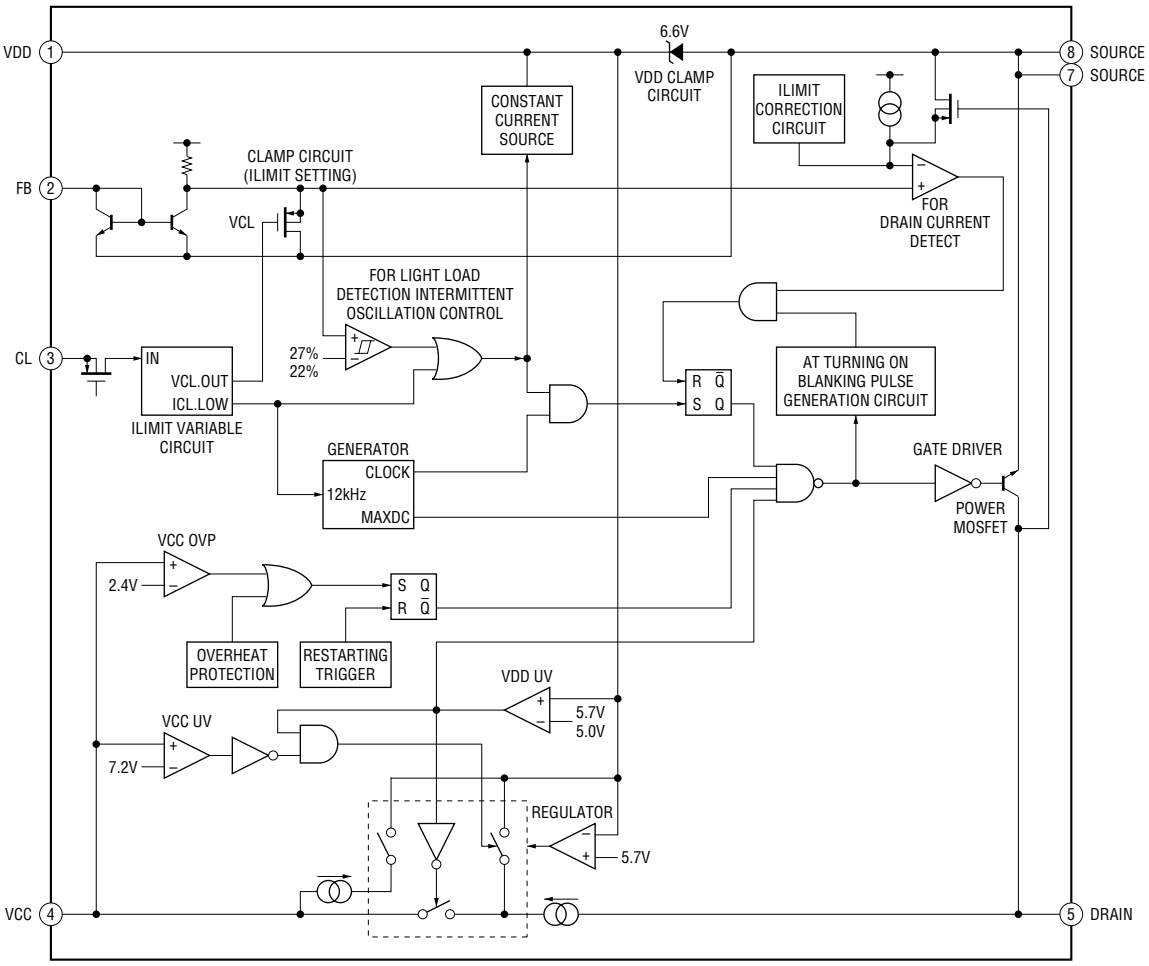
– USB POWER Board –

IC319 SI-8008TFE



– SUB POWER Board –

IC601 MIP2F20MS1SO



- **IC Pin Function Description**

CD BOARD IC101 TC94A70FG-008 (CD-MP3 PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	AVSS3	-	Ground terminal
2	RFZi	I	RF ripple zero crossing signal input terminal
3	RFRP	O	RF ripple signal output terminal
4	SBAD/RFDC	O	Sub beam addition signal or RF peak detection signal output terminal Not used
5	FEi	O	Focus error signal output terminal Not used
6	TEi	O	Tracking error signal output terminal
7	TEZi	I	Tracking error zero crossing signal input terminal
8	AVDD3	-	Power supply terminal (+3.3 V)
9	FOo	O	Focus coil drive signal output terminal
10	TRo	O	Tracking coil drive signal output terminal
11	VREF	I	Reference voltage (+1.65V) input terminal
12	FMO	O	Sled motor drive signal output terminal
13	DMO	O	Spindle motor drive signal output terminal
14	VSSP3	-	Ground terminal
15	VCOi	I	VCO control voltage input terminal
16	VDDP3	-	Power supply terminal (+3.3 V)
17	VDD1	-	Power supply terminal (+1.5 V)
18	VSS	-	Ground terminal
19	FGiN	I	FG signal input terminal Not used
20	IO0 (/HSO)	I	Disc inner position detection signal input terminal
21	IO1 (/UHSO)	O	Not used
22	XVSS3	-	Ground terminal
23	XI	I	System clock input terminal (16.9344 MHz)
24	XO	O	System clock output terminal (16.9344 MHz)
25	XVDD3	-	Power supply terminal (+3.3 V)
26	DVSS3	-	Ground terminal
27	RO	O	Audio data (R-ch) output to the input selector
28	DVDD3	-	Power supply terminal (+3.3 V)
29	DVR	O	Reference voltage (+1.65V) output terminal
30	LO	O	Audio data (L-ch) output to the input selector
31	DVSS3	-	Ground terminal
32	VDDT3	-	Power supply terminal (+3.3 V)
33	VSS1	-	Ground terminal
34	VDD1	-	Power supply terminal (+1.5 V)
35	VDDM1	-	Power supply terminal (+1.5 V)
36	SRAMSTB	I	S-RAM standby mode control signal input terminal Fixed at "L" in this set
37	XRST	I	Reset signal input from the system controller "L": reset
38, 39	BUS0, BUS1	I	Serial data input from the system controller and USB controller
40	BUS2 (SO)	I	Serial data input from the system controller and USB controller
41	BUS3 (SI)	I	Serial data input from the system controller and USB controller
42	BUCK (CLK)	I	Serial data transfer clock signal input from the system controller and USB controller
43	XCCE	I	Chip enable signal input from the system controller and USB controller
44	TEST	I	Setting terminal for test mode Normally fixed at "L"
45	IRQ	I	Interrupt request signal input terminal Not used
46	AoUT3 (PO4)	O	Request signal output to the USB controller
47	AoUT2 (PO5)	O	Audio data output to the USB controller

Pin No.	Pin Name	I/O	Description
48	PIO0	O	Request signal output to the system controller and USB controller
49, 50	PIO1, PIO2	O	Not used
51	PIO3	I	Gate signal input from the USB controller
52	VSS1	-	Ground terminal
53	VDDT3	-	Power supply terminal (+3.3 V)
54	SBSY	O	Subcode block sync signal output to the system controller
55	SBOK/FOK	O	Not used
56	IPF	O	Not used
57	SFSY/LOCK	O	Not used
58	ZDET	O	Zero detection signal output terminal Not used
59	GPIN	I	Not used
60	MS	I	Microcomputer interface mode selection signal input terminal Fixed at "H" in this set
61	DOUT (PO6)	O	Digital audio data output terminal Not used
62	AOUT (PO7)	O	Audio data output terminal Not used
63	BCK (PO8)	O	Audio data transfer clock signal output to the USB controller
64	LRCK (PO9)	O	L/R sampling clock signal output terminal Not used
65	AIN (PI4)	I	Digital audio data input from USB controller
66	BCKi (PI5)	I	Bit clock signal input from the USB controller
67	LRCKi (PI6)	I	L/R sampling clock signal input from the USB controller
68	VDD1	-	Power supply terminal (+1.5 V)
69	VSS	-	Ground terminal
70	AWRC	-	Not used
71	PVDD3	-	Power supply terminal (+3.3 V)
72	Pdo	O	Phase error margin signal between EFM signal and PLCK signal output terminal
73	TMAXS	O	TMAX detection signal output terminal Not used
74	TMAX	O	TMAX detection signal output terminal
75	LPFN	I	Inverted signal input from the operation amplifier for PLL loop filter
76	LPFo	O	Signal output from the operation amplifier for PLL loop filter
77	PVREF	I	Reference voltage (+1.65V) input terminal
78	VCOF	O	VCO filter output terminal
79	PVSS3	-	Ground terminal
80	SLCo	O	EFM slice level output terminal
81	RFi	I	RF signal input terminal
82	RFRPi	I	RF ripple signal input terminal
83	RFEQo	O	EFM slice level output terminal
84	VRo	O	Reference voltage (+1.65V) output terminal
85	RESiN	O	External resistor connection terminal
86	VMDiR	O	Reference voltage (+1.65V) output terminal for automatic power control circuit
87	TESTR	O	Low-pass filter terminal for RFEQO offset correction
88	AGCi	I	RF signal amplitude adjustment amplification input terminal
89	RFo	O	RF signal generation amplification output terminal
90	RVDD3	-	Power supply terminal (+3.3 V)
91	LDo	O	Laser diode on/off control signal output to the automatic power control circuit "H": laser diode on
92	MDi	I	Light amount monitor input from the laser diode of optical pick-up block
93	RVSS3	-	Ground terminal
94	FNi2 (C)	I	Main beam (C) input from the optical pick-up block
95	FNi1 (A)	I	Main beam (A) input from the optical pick-up block

Pin No.	Pin Name	I/O	Description
96	FPi2 (D)	I	Main beam (D) input from the optical pick-up block
97	FPi1 (B)	I	Main beam (B) input from the optical pick-up block
98	TPi (F)	I	Sub beam (F) input from the optical pick-up block
99	TNPC	O	External capacitor connection terminal
100	TNi (E)	I	Sub beam (E) input from the optical pick-up block

MAIN BOARD IC301 M3062LFGPFP-711 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 3	CD BUS2 to CD BUS0	O	Serial data output to the CD-MP3 processor
4	SIRCS	I	SIRCS signal input from the remote control receiver
5	DEC BUS SEL2	O	Data selection signal output terminal Not used
6	DEC BUS SEL1	O	Data selection signal output terminal
7	S-MASTER SOFT MUTE	O	Soft muting control signal output to the stream processor
8	BYTE	I	External data bus width selection signal input terminal
9	CN VSS	I	Processor mode switch input terminal (for test)
10	XCIN	I	Sub system clock input terminal (32.768 kHz)
11	XCOUT	O	Sub system clock output terminal (32.768 kHz)
12	RESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (5 MHz)
14	VSS	-	Ground terminal
15	XIN	I	Main system clock input terminal (5 MHz)
16	VCC	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt signal input terminal Not used
18	RDS INT	I	RDS data transfer clock signal input terminal Not used
19	SBSY	I	Subcode block sync signal input from the CD-MP3 processor
20	AC CUT	I	AC cut on/off detection signal input terminal "L": AC cut on
21	CD ON	O	Power on/off control signal output terminal for CD section "H": power on
22	CD DRIVE MUTE	O	Muting signal output to the coil/motor driver
23	CD CLK	O	Serial data transfer clock signal output to the CD-MP3 processor
24	CD CCE	O	Chip enable signal output to the CD-MP3 processor
25	CD XRST	O	Reset signal output to the CD-MP3 processor "L": reset
26	MP3 IREQ	I	Request signal input from the CD-MP3 processor
27	USB RESET	O	Reset signal output to the USB controller "L": reset
28	USB POWER	O	Power on/off control signal output terminal for USB section "H": power on
29	IIC CLK	I/O	Two-way IIC clock bus terminal Not used
30	IIC DATA	I/O	Two-way IIC data bus terminal Not used
31	BT_DOUT/ DAB TXD	O	Serial data output terminal for bluetooth section or DAB tuner section Not used
32	BT_DIN/ DAB RXD	I	Serial data input terminal for bluetooth section or DAB tuner section Not used
33	S-MASTER LATCH	O	Serial data latch pulse signal output to the stream processor
34	BT_RTS	O	Ready to send signal output terminal for bluetooth section Not used
35	USB TXD/ SAT TXD	O	Serial data output to the USB controller
36	USB RXD/ SAT RXD	I	Serial data input from the USB controller
37	USB_CTS	I	Clear to send signal input from the USB controller
38	USB_RTS	O	Ready to send signal output to the USB controller
39	S-MASTER INIT	O	Initialize signal output to the stream processor
40	S-MASTER NSP MUTE	O	NSP muting control signal output to the stream processor
41	PULL DOWN	O	Connected to the ground

Pin No.	Pin Name	I/O	Description
42	S-MASTER SHIFT	O	Serial data transfer clock signal output to the stream processor
43	S-MASTER DATA	O	Serial data output to the stream processor
44	S-MASTER SD	I	Shut down signal input from the digital power amplifier "L": shut down
45	S-MASTER RST	O	Reset signal output to the digital power amplifier "L": reset
46	PULL UP	O	Connected to the power supply
47	S-MASTER PG MUTE	O	PG muting control signal output to the stream processor
48	CDM LOAD OUT	O	Loading motor control signal output terminal (for loading out)
49	CDM LOAD IN	O	Loading motor control signal output terminal (for loading in)
50	CDM OPEN SW	I	Disc tray open position detection signal input terminal
51	CDM CLOSE SW	I	Disc tray close position detection signal input terminal
52	HP MUTE	O	Headphone muting on/off control signal output terminal "H": muting on
53	BT AUD OUT MUTE	O	Blutetooth muting on/off control signal output terminal Not used
54	TA LINE-MUTE	O	Line muting on/off control signal output terminal "H": muting on
55	AMP DATA	O	Serial data output to the electrical volume
56	AMP CLOCK	O	Serial data transfer clock signal output to the electrical volume
57	SEL A	O	Input selection control signal output terminal Not used
58	SEL B	O	Input selection control signal output terminal Not used
59	SEL INH	O	Input selection control signal output terminal Not used
60	BT_AV_ ROLE	O	Transmission/reception mode notification signal output terminal for bluetooth section Not used
61	BT_CTS	I	Clear to send signal input terminal for bluetooth section Not used
62	VCC	-	Power supply terminal (+3.3V)
63	BT RESET	O	Reset signal output terminal for bluetooth section Not used
64	VSS	-	Ground terminal
65	BT POWER	O	Power on/off control signal output terminal for bluetooth section Not used
66	MODEL IN	I	Setting terminal for the model
67	SPEC IN	I	Setting terminal for the destination
68	HP DET	I	Plug insert detection signal input terminal for PHONES jack "L": plug insert
69	AUDIO IN DET	I	Plug insert detection signal input terminal for AUDIO IN jack "L": plug insert
70	FL POWER ON	O	Power on/off control signal output terminal for fluorescent indicator tube "H": power on
71	FL SCLK	O	Shift clock signal output to the fluorescent indicator tube
72	FL CS	O	Chip select signal output to the fluorescent indicator tube
73	FL SD	O	Serial data output to the fluorescent indicator tube
74	KEY WAKE UP	I	Wake up signal input terminal
75	FL RESET	O	Reset signal output to the fluorescent indicator tube "L": reset
76	USB LED	O	LED drive signal output terminal for USB MEMORY indicator "H": LED on
77	BT LED	O	LED drive signal output terminal for BLUETOOTH indicator Not used
78	STBY LED	O	LED drive signal output terminal for STANDBY indicator "H": LED on
79	NC	O	Not used
80	STBY RELAY	O	Sub power on/off control signal output terminal "H": power on
81 to 83	KEY2 to KEY0	I	Top and front panel key input terminal (A/D input)
84	VOLUME JOG	I	Jog dial pulse input from the rotary encoder (VOLUME) (A/D input)
85	AC DET	I	AC power detection signal input terminal
86	RDS DATA	I	RDS data input terminal Not used
87	ST CE	O	Chip enable signal output to the tuner (FM/AM)
88	ST DATA IN /STEREO	I	Serial data and stereo detection signal input from the tuner (FM/AM)

Pin No.	Pin Name	I/O	Description
89	ST CLK	O	Serial data transfer clock signal output to the tuner (FM/AM)
90	ST DATA OUT	O	Serial data output to the tuner (FM/AM)
91	XM RESET	O	Reset signal output terminal for XM section Not used
92	XM_PWR _3.3V/5V	O	Power on/off control signal output terminal for XM section Not used
93	SAT SEL	O	XM/SIRIUS mode selection signal output terminal Not used
94	SR_POWER	O	Power on/off control signal output terminal for SIRIUS Not used
95	DAB_PWR_3.3V	O	Power (+3.3V) on/off control signal output terminal for DAB section Not used
96	AVSS	-	Ground terminal
97	DAB_PWR_5V	O	Power (+5V) on/off control signal output terminal for DAB section Not used
98	VREF	I	Reference voltage (+3.3V) input terminal
99	AVCC	-	Power supply terminal (+3.3V)
100	CD BUS3	O	Serial data output to the CD-MP3 processor

USB BOARD IC901 TMP92CD28FG-2CB4 (USB CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	/RESET	I	Reset signal input from the system controller "L": reset
2	DI	I	Ready to send signal input from the system controller
3, 4	NO USE	O	Not used
5	G-3	I	Function selection signal input terminal Fixed at "L" in this set
6	DVCC	-	Power supply terminal (+3.3 V)
7 to 9	NO USE	O	Not used
10	DVSS	-	Ground terminal
11	DVCC	-	Power supply terminal (+3.3 V)
12	RVOUT1	O	Reference voltage (+3.3 V) output terminal
13, 14	RVIN	I	Reference voltage (+3.3 V) input terminal
15	RVOUT2	O	Reference voltage (+3.3 V) output terminal
16	DVCC	-	Power supply terminal (+3.3 V)
17	DVSS	-	Ground terminal
18 to 25	D0 to D7	I/O	Two-way data bus with the S-RAM
26	DVSS	-	Ground terminal
27	DVCC	-	Power supply terminal (+3.3 V)
28 to 35	D8 to D15	I/O	Two-way data bus with the S-RAM
36	A0	O	Address signal output terminal Not used
37 to 43	A1 to A7	O	Address signal output to the S-RAM
44	DVSS	-	Ground terminal
45	DVCC	-	Power supply terminal (+3.3 V)
46 to 54	A8 to A16	O	Address signal output to the S-RAM
55 to 58	BUS0 to BUS3	O	Serial data output to the CD-MP3 processor
59	/BUCK	O	Serial data transfer clock signal output to the CD-MP3 processor
60	/CCE	O	Chip enable signal output to the CD-MP3 processor
61	NO USE	O	Not used
62	DVSS	-	Ground terminal
63	DVCC	-	Power supply terminal (+3.3 V)
64	RD	O	Output enable signal output to the S-RAM
65	WR	O	Write enable signal output to the S-RAM
66	SRLLB	O	Lower-byte control signal output to the S-RAM
67	SRLUB	O	Upper-byte control signal output to the S-RAM
68	NO USE	O	Not used
69	BOOT	I	Boot mode selection signal input terminal "L": boot mode
70	CS2	I	Chip select signal output to the S-RAM
71	LRCK	O	L/R sampling clock signal output to the CD-MP3 processor
72	AM1	I	Function mode selection signal input terminal Fixed at "H" in this set
73	X2	O	System clock output terminal (9 MHz)
74	DVSS	-	Ground terminal
75	X1	I	System clock input terminal (9 MHz)
76	DVCC	-	Power supply terminal (+3.3 V)
77	USBOC	I	Over current detection signal input terminal
78	USBPON	O	USB VBUS power on/off control signal output terminal "H": power on
79	D+	I/O	Two-way data (positive) bus with the USB connector
80	D-	I/O	Two-way data (negative) bus with the USB connector
81	AM0	I	Function mode selection signal input terminal Fixed at "H" in this set

Pin No.	Pin Name	I/O	Description
82	NO USE	O	Not used
83	DVSS	-	Ground terminal
84	DO	O	Clear to send signal output to the system controller
85	DATA	I	Audio data input from the CD-MP3 processor
86	CLOCK	I	Audio data transfer clock signal input from the CD-MP3 processor
87	TXD1	O	Serial data output to the system controller
88	RXD1	I	Serial data input from the system controller
89	NO USE	O	Not used
90	SDA	I/O	Two-way EEPROM IIC data bus terminal Not used
91	SCL	I/O	Two-way EEPROM IIC clock bus terminal Not used
92	BCK	O	Bit clock signal output to the CD-MP3 processor
93	DATA	O	Audio data output to the CD-MP3 processor
94	GATE	O	Gate signal output to the CD-MP3 processor
95	DVCC	-	Power supply terminal (+3.3 V)
96	REQ	I	Request signal input from the CD-MP3 processor
97	ST-REQ	I	Request signal input from the CD-MP3 processor
98, 99	G-1, G-2	I	Function selection signal input terminal Fixed at "L" in this set
100	DVSS	-	Ground terminal

SWITCHING POWER BOARD IC11 CXD9841P (POWER CONTROL)

Pin No.	Pin Name	I/O	Description
1	VSENSE	I	AC line voltage detection signal input terminal
2	F/B	I	Feed back signal input terminal for frequency modulation of oscillator
3	CT	I	Connected to the external capacitor for oscillator duty/frequency setting
4	RT	I	Connected to the external resistor for oscillator frequency setting
5	GND	-	Ground terminal
6	PROTECT	I	Connected to the external capacitor for determines intermittent operation period when abnormal detection state
7	SS	I	Connected to the external capacitor for soft start timing
8	VC1	I	Power supply terminal for control circuit "L": stop
9	OCP	I	Over current detection signal and didt protection signal input terminal
10	VC2	O	Power supply output terminal for driver
11	P-GND	-	Ground terminal for low voltage side driver
12	VG (L)	O	Low voltage side driver drive signal output terminal
13	-	-	Not used
14	VB	O	Power supply output terminal for high voltage side driver
15	VS	I	High voltage side driver reference voltage input terminal
16	VG (H)	O	High voltage side driver drive signal output terminal
17	-	-	Not used
18	VD	I	Terminal for drain-kick starting When starting, current is supplied directly from the rectification diode to VC1

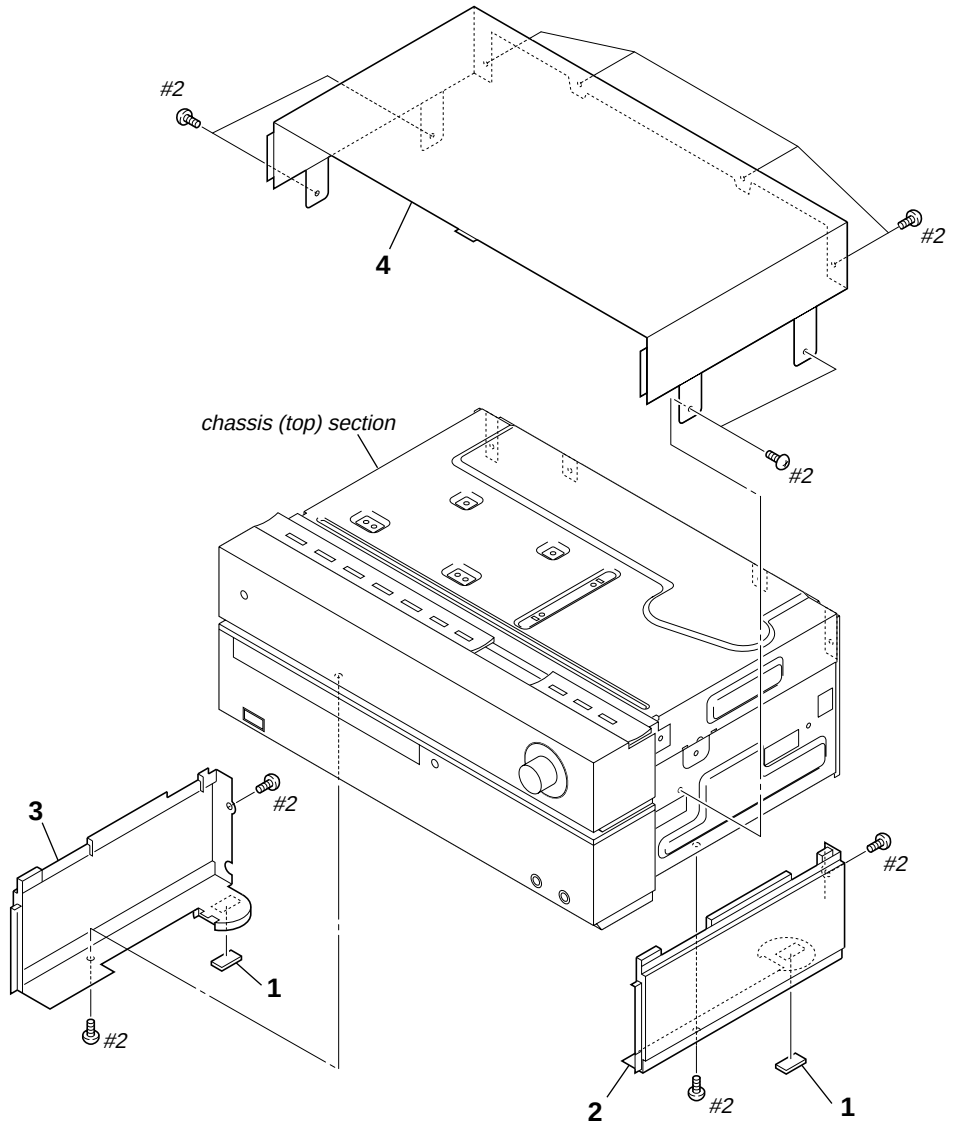
2-7. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.
- Abbreviation
  AR : Argentina model
  E51 : Chilean and Peruvian models
  MX : Mexican model
  RU : Russian model

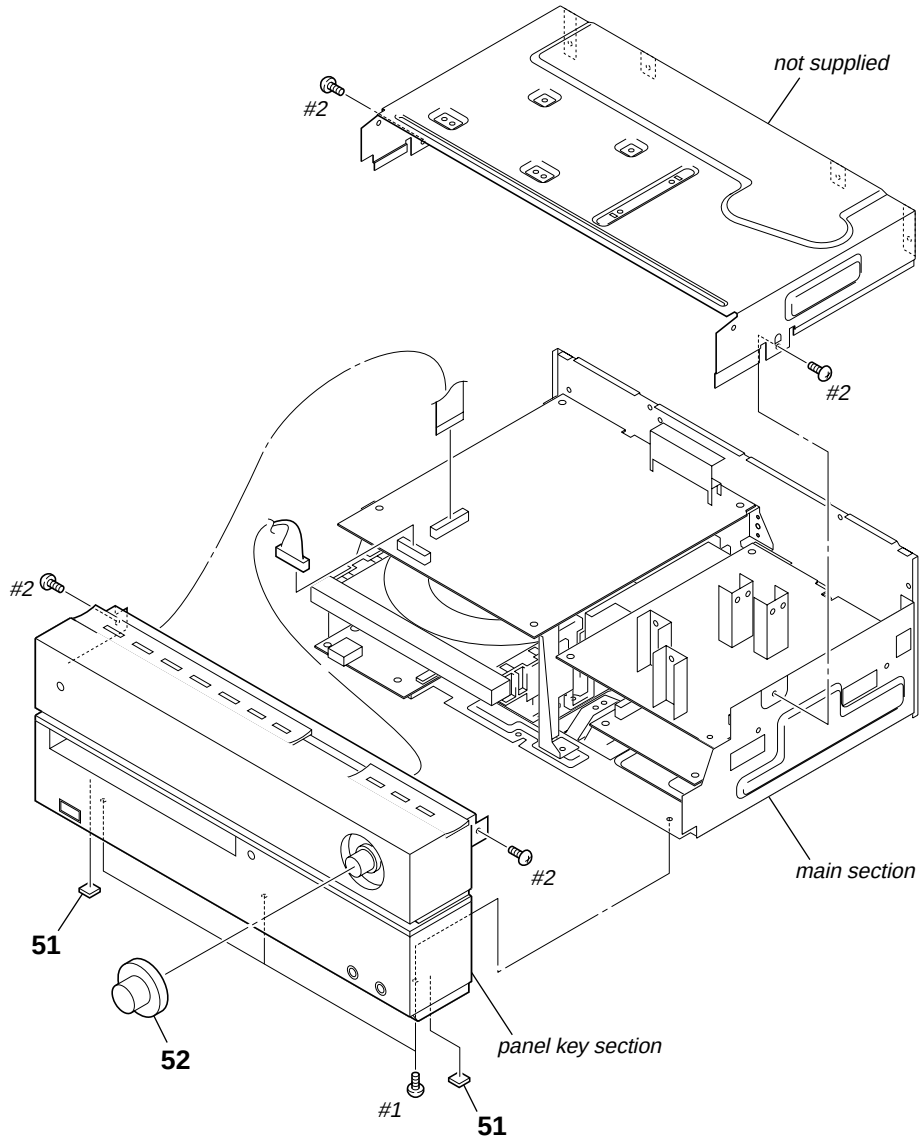
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

2-7-1. PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	3-198-753-11	FOOT (FELT)	
2	2-895-132-01	PANEL (SIDE R)	
3	2-895-131-01	PANEL (SIDE L)	
4	2-895-129-11	PANEL (TOP)	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

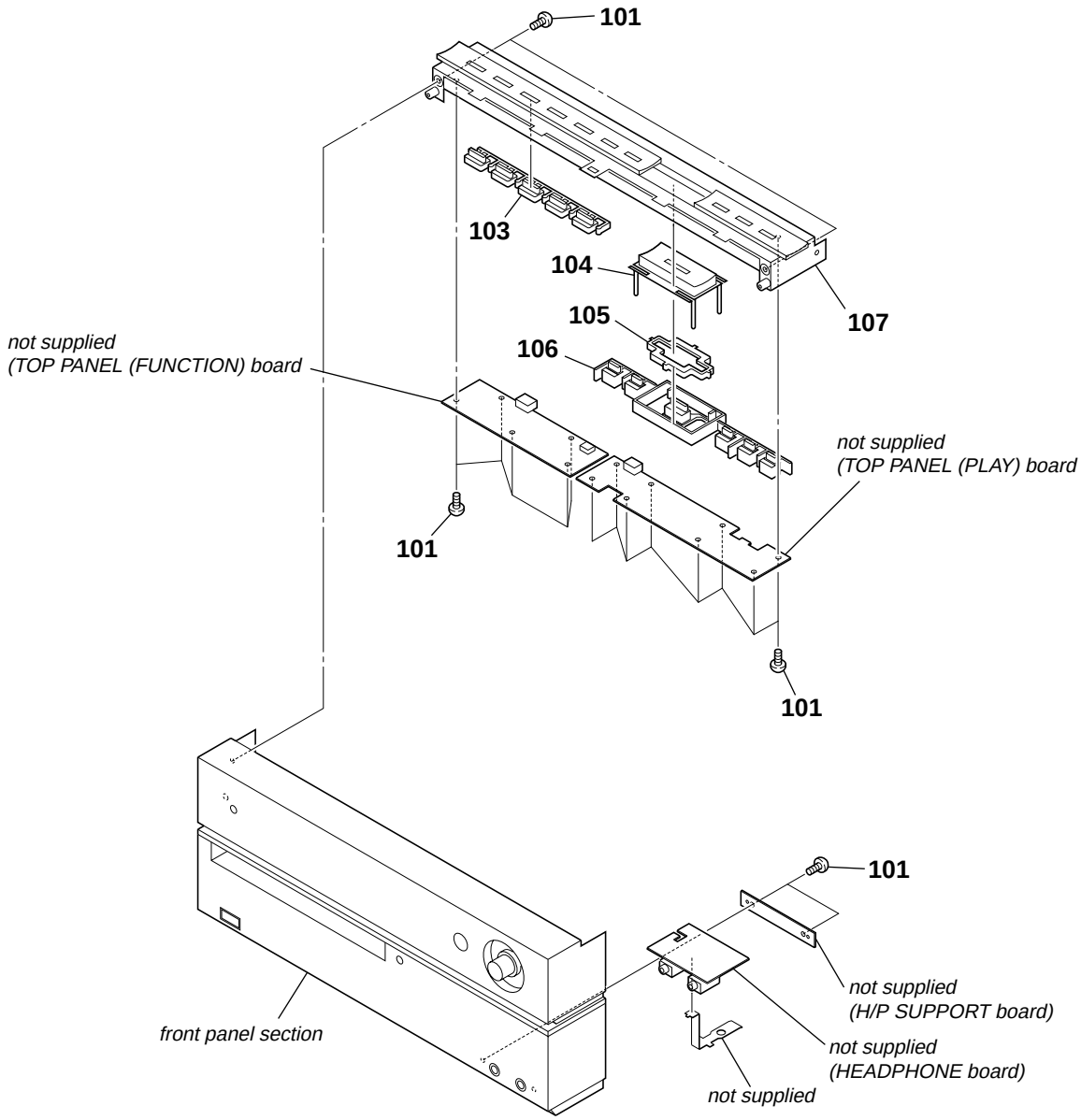
2-7-2. CHASSIS (TOP) SECTION



Ref. No.	Part No.	Description	Remark
51	3-198-753-01	FOOT (FELT)	
52	2-895-152-01	KNOB (VOL)	

Ref. No.	Part No.	Description	Remark
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

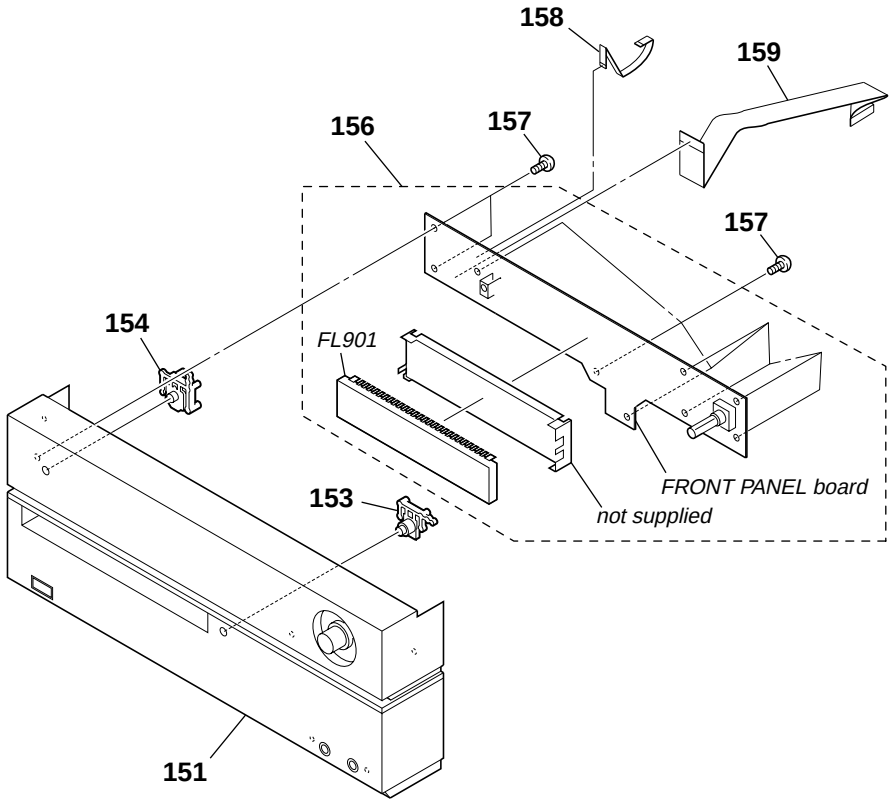
2-7-3. PANEL KEY SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
101	3-087-053-01	+BVTP2.6 (3CR)	
103	2-895-142-01	BUTTON (FUNCTION)	
104	2-895-143-01	BUTTON (FOLDER)	
105	2-895-153-01	BASE (FOLDER)	
106	2-895-144-01	BUTTON (ENTER)	
107	2-895-133-11	PANEL (KEY)	

2-7-4. FRONT PANEL SECTION

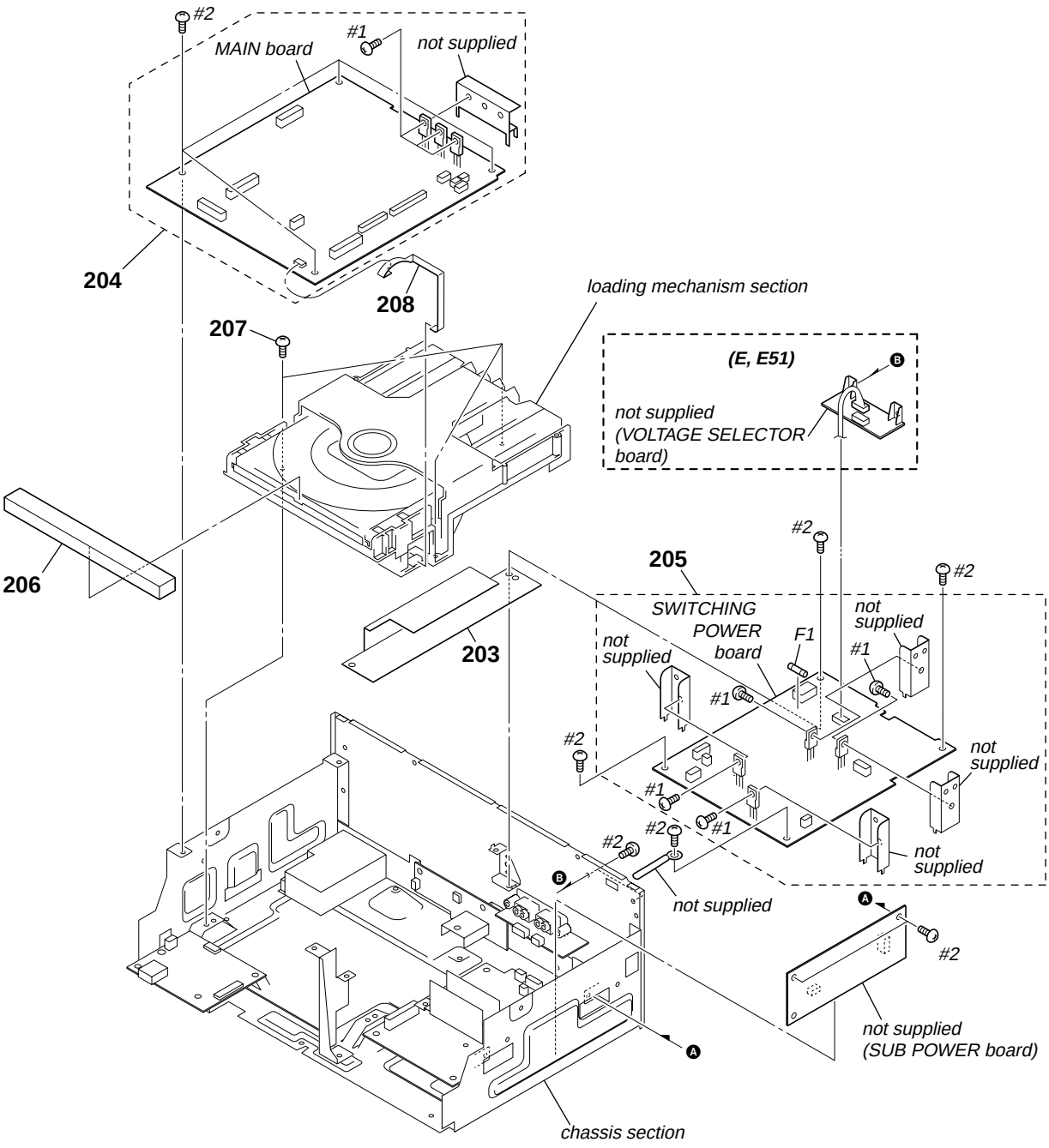


Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
151	X-2177-358-1	PANEL (FRONT) ASSY	
153	2-895-141-01	BUTTON (EJECT)	
154	X-2177-363-1	BUTTON (POWER) ASSY	
156	A-1243-276-A	FRONT PANEL BOARD, COMPLETE	
157	3-087-053-01	+BVTP2.6 (3CR)	

Ref. No.	Part No.	Description	Remark
158	1-831-756-21	CABLE, FLEXIBLE FLAT (5 CORE)	
159	1-831-797-21	CABLE, FLEXIBLE FLAT (17 CORE)	
FL901	1-519-939-11	INDICATOR TUBE, FLUORESCENT	

2-7-5. MAIN SECTION

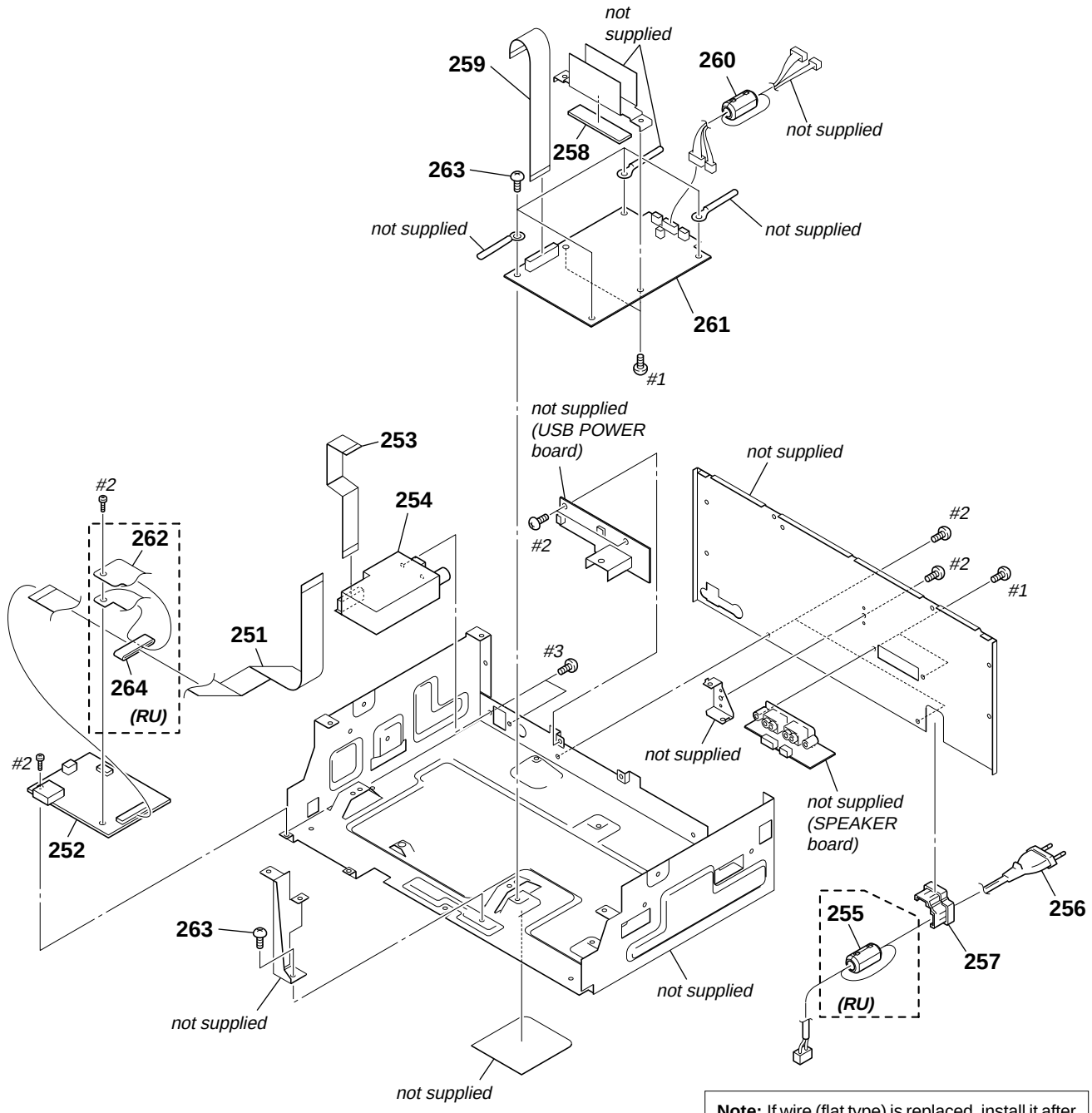


Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
203	3-196-590-02	INSULATED PLATE (POWER)	
204	A-1258-343-A	MAIN BOARD, COMPLETE (RU)	
204	A-1258-358-A	MAIN BOARD, COMPLETE (E, E51, MX, AR)	
205	A-1258-367-A	SWITCHING POWER BOARD, COMPLETE (E, E51)	
205	A-1258-572-A	SWITCHING POWER BOARD, COMPLETE (AR, RU)	
205	A-1258-604-A	SWITCHING POWER BOARD, COMPLETE (MX)	

Ref. No.	Part No.	Description	Remark
206	X-2177-362-1	LID (CD) ASSY	
207	3-077-331-01	+BV3 (3-CR)	
208	1-832-535-21	CABLE, FLEXIBLE FLAT (5 CORE)	
⚠F1	1-576-232-51	FUSE (H.B.C.) (5A/250V)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

2-7-6. CHASSIS SECTION

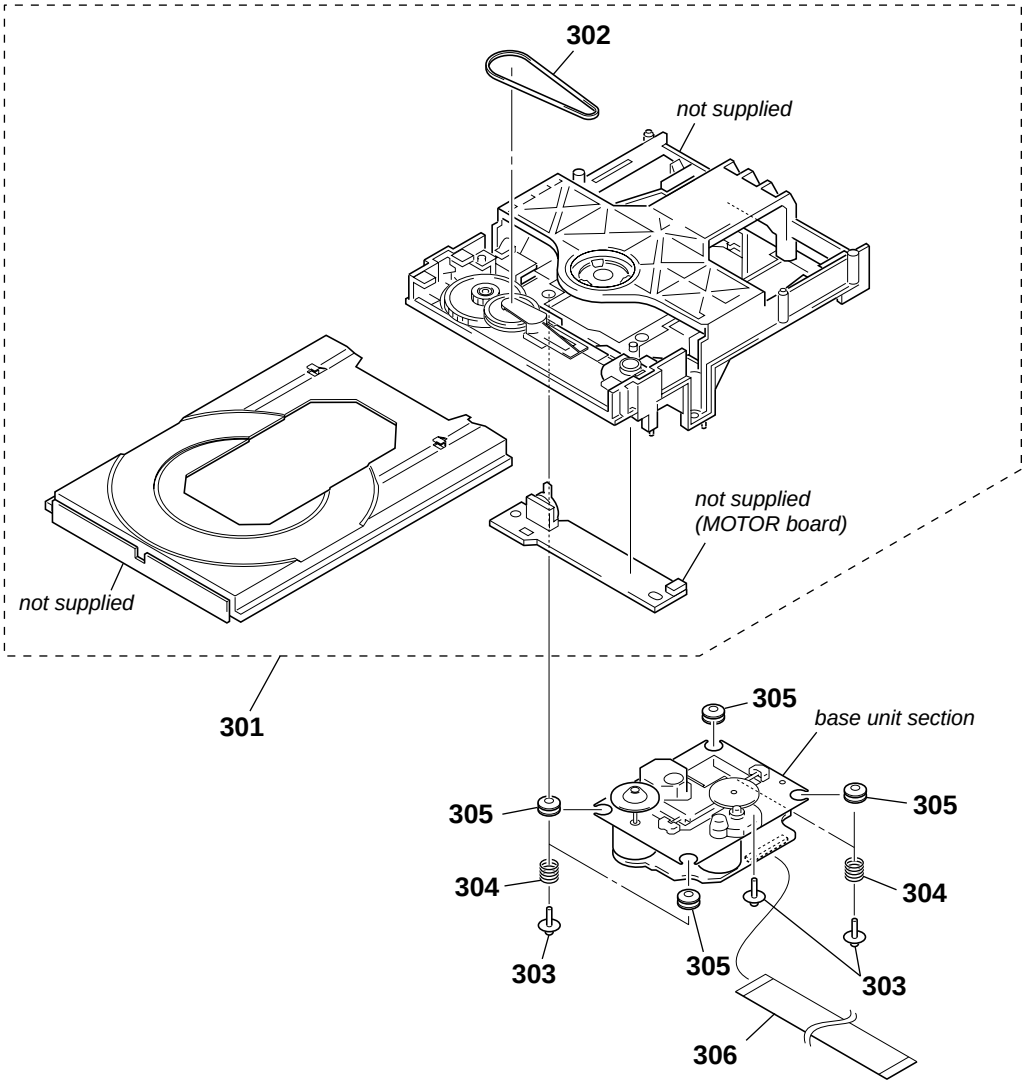


Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
251	1-832-618-21	CABLE, FLEXIBLE FLAT (21 CORE)	
252	A-1257-710-A	USB BOARD, COMPLETE	
253	1-832-815-21	CABLE, FLEXIBLE FLAT (9 CORE)	
254	1-693-734-21	TUNER (FM/AM) (E, E51, MX, AR)	
254	1-693-735-11	TUNER (FM/AM) (RU)	
255	1-457-368-11	CORE, FERRITE (RU)	
⚠256	1-827-226-31	CORD, POWER (MX)	
⚠256	1-830-188-11	CORD, POWER (E, E51, RU)	
⚠256	1-832-227-11	CORD, POWER (AR)	
257	3-703-244-00	BUSHING (2104), CORD (E, E51, AR, RU)	
* 257	3-703-571-12	BUSHING (S) (4516), CORD (MX)	

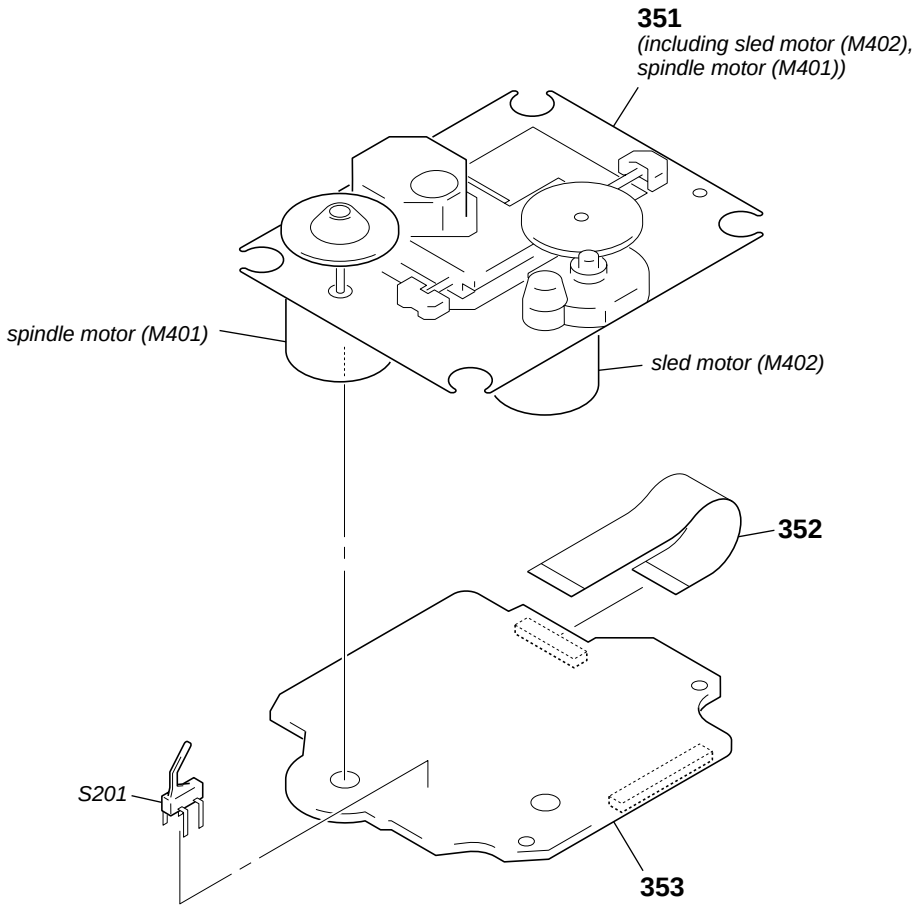
Ref. No.	Part No.	Description	Remark
258	2-514-691-01	SHEET, RADIATION	
259	1-832-865-21	CABLE, FLEXIBLE FLAT (19 CORE)	
260	1-400-932-11	FILTER, CLAMP	
261	A-1243-637-A	AMP BOARD, COMPLETE	
262	3-198-559-01	SHEET (USB) (RU)	
263	3-077-331-21	+BV3 (3-CR)	
264	1-457-413-11	CORE, FERRITE (RU)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-863-09	SCREW +BVTT 2.6X8 (S)	

2-7-7. LOADING MECHANISM SECTION



Ref. No.	Part No.	Description	Remark
301	A-1242-967-A	LOADING (BK) ASSY	
302	3-080-478-01	BELT	
303	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
304	4-227-045-41	SPRING (INSULATOR)	
305	4-229-005-41	INSULATOR	
306	1-832-645-21	CABLE, FLEXIBLE FLAT (27 CORE)	

2-7-8. BASE UNIT SECTION (BU-K6BD91UR-WOD)



Ref. No.	Part No.	Description	Remark
⚠351	A-4735-357-A	BASE ASSY, OP (KSM-213D)	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
353	A-1236-250-A	CD BOARD, COMPLETE	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	

AMP

2-8. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- Abbreviation
  AR : Argentina model
  E51 : Chilean and Peruvian models
  MX : Mexican model
  RU : Russian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-1243-637-A	AMP BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-126-961-11	ELECT	2.2uF	20%	50V
C702	1-136-497-81	FILM	0.1uF	5%	50V
C704	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C707	1-112-245-21	ELECT	47uF	20%	35V
C708	1-112-245-21	ELECT	47uF	20%	35V
C709	1-112-245-21	ELECT	47uF	20%	35V
C710	1-112-245-21	ELECT	47uF	20%	35V
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C713	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C714	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C715	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C716	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C717	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C718	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C719	1-137-806-21	ELECT	1800uF	20%	35V
C720	1-131-704-11	FILM	1uF	5%	50V
C722	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C723	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C724	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C725	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C726	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C728	1-131-704-11	FILM	1uF	5%	50V
C729	1-126-767-11	ELECT	1000uF	20%	16V
C730	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C731	1-104-658-91	ELECT	100uF	20%	10V
C732	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C733	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C735	1-126-964-11	ELECT	10uF	20%	50V
C736	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C737	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C738	1-126-964-11	ELECT	10uF	20%	50V
C739	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C740	1-126-923-91	ELECT	220uF	20%	10V
C741	1-126-961-11	ELECT	2.2uF	20%	50V
C742	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C743	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C744	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C745	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C746	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C747	1-104-658-91	ELECT	100uF	20%	10V
C751	1-126-961-11	ELECT	2.2uF	20%	50V
C752	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C753	1-104-658-91	ELECT	100uF	20%	10V
C754	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C756	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C757	1-126-964-11	ELECT	10uF	20%	50V
C758	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C760	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C761	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C762	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C763	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C764	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C765	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C766	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C767	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C768	1-100-756-91	CERAMIC CHIP	0.047uF		50V
C769	1-137-806-21	ELECT	1800uF	20%	35V
C770	1-131-704-11	FILM	1uF	5%	50V
C772	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C773	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C774	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C775	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C777	1-131-704-11	FILM	1uF	5%	50V
C778	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C779	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C780	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C781	1-126-964-11	ELECT	10uF	20%	50V
C783	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C784	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C785	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C786	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C787	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C788	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C790	1-126-933-11	ELECT	100uF	20%	16V
C791	1-136-497-81	FILM	0.1uF	5%	50V
C794	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C796	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C797	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C798	1-126-964-11	ELECT	10uF	20%	50V
C799	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C801	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C804	1-163-205-00	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C806	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C831	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C832	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C844	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C845	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C846	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C847	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C851	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C854	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C855	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C856	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN700	1-784-780-11	CONNECTOR, FFC 19P			
		< EARTH TERMINAL >			
EP701	1-537-771-21	TERMINAL BOARD, GROUND			
EP702	1-537-771-21	TERMINAL BOARD, GROUND			
EP703	1-537-771-21	TERMINAL BOARD, GROUND			
		< IC >			
IC701	6-710-554-01	IC PCM1808PWR			
IC702	6-702-302-01	IC TK11133CSCL-G			
IC703	6-701-261-01	IC MC74VHC74DTR2			
IC704	6-702-300-01	IC TK11118CSCL-G			
IC705	6-705-979-01	IC CXD9788AR			
IC707	6-710-134-01	IC CXD9845AM			
IC709	6-701-189-01	IC MC74VHC1GU04DFT1			
		< JUMPER RESISTOR/COIL >			
L701	1-216-295-00	SHORT CHIP	0		
L702	1-216-295-00	SHORT CHIP	0		
L703	1-216-295-00	SHORT CHIP	0		
L704	1-216-295-00	SHORT CHIP	0		
L705	1-412-939-11	INDUCTOR	1uH		
L710	1-457-235-11	COIL, CHOKE	10uH		
L711	1-457-235-11	COIL, CHOKE	10uH		
L760	1-457-235-11	COIL, CHOKE	10uH		
L761	1-457-235-11	COIL, CHOKE	10uH		
		< TRANSISTOR >			
Q701	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q702	8-729-600-22	TRANSISTOR	2SA1235-F		
Q703	8-729-600-22	TRANSISTOR	2SA1235-F		
Q707	8-729-036-89	TRANSISTOR	KTC3198GR-AT		
Q752	8-729-600-22	TRANSISTOR	2SA1235-F		
Q753	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
R701	1-216-809-11	METAL CHIP	100	5%	1/10W
R706	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-798-11	METAL CHIP	12	5%	1/10W
R708	1-216-798-11	METAL CHIP	12	5%	1/10W
R709	1-216-798-11	METAL CHIP	12	5%	1/10W
R710	1-216-798-11	METAL CHIP	12	5%	1/10W
R711	1-216-809-11	METAL CHIP	100	5%	1/10W
R712	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R713	1-216-809-11	METAL CHIP	100	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R718	1-216-833-11	METAL CHIP	10K	5%	1/10W
R719	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R720	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R721	1-216-833-11	METAL CHIP	10K	5%	1/10W
R722	1-216-841-11	METAL CHIP	47K	5%	1/10W
R724	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R725	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R726	1-216-849-11	METAL CHIP	220K	5%	1/10W
R727	1-216-845-11	METAL CHIP	100K	5%	1/10W
R728	1-216-849-11	METAL CHIP	220K	5%	1/10W
R731	1-216-817-11	METAL CHIP	470	5%	1/10W
R733	1-216-817-11	METAL CHIP	470	5%	1/10W
R739	1-216-833-11	METAL CHIP	10K	5%	1/10W
R740	1-216-833-11	METAL CHIP	10K	5%	1/10W
R741	1-216-809-11	METAL CHIP	100	5%	1/10W
R742	1-216-833-11	METAL CHIP	10K	5%	1/10W
R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R744	1-216-864-11	SHORT CHIP	0		
R745	1-216-809-11	METAL CHIP	100	5%	1/10W
R746	1-216-809-11	METAL CHIP	100	5%	1/10W
R747	1-216-817-11	METAL CHIP	470	5%	1/10W
R748	1-216-841-11	METAL CHIP	47K	5%	1/10W
R749	1-216-864-11	SHORT CHIP	0		
R750	1-216-841-11	METAL CHIP	47K	5%	1/10W
R751	1-216-809-11	METAL CHIP	100	5%	1/10W
R752	1-216-809-11	METAL CHIP	100	5%	1/10W
R754	1-216-809-11	METAL CHIP	100	5%	1/10W
R755	1-216-809-11	METAL CHIP	100	5%	1/10W
R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R757	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R759	1-216-835-11	METAL CHIP	15K	5%	1/10W
R765	1-216-864-11	SHORT CHIP	0		
R768	1-216-833-11	METAL CHIP	10K	5%	1/10W
R769	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R770	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R771	1-216-833-11	METAL CHIP	10K	5%	1/10W
R772	1-216-833-11	METAL CHIP	10K	5%	1/10W
R773	1-216-833-11	METAL CHIP	10K	5%	1/10W
R774	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R775	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R776	1-216-849-11	METAL CHIP	220K	5%	1/10W
R777	1-216-845-11	METAL CHIP	100K	5%	1/10W
R778	1-216-849-11	METAL CHIP	220K	5%	1/10W
R780	1-216-801-11	METAL CHIP	22	5%	1/10W
R781	1-216-809-11	METAL CHIP	100	5%	1/10W
R782	1-216-857-11	METAL CHIP	1M	5%	1/10W
R783	1-216-801-11	METAL CHIP	22	5%	1/10W
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-809-11	METAL CHIP	100	5%	1/10W
R786	1-216-809-11	METAL CHIP	100	5%	1/10W
R787	1-216-809-11	METAL CHIP	100	5%	1/10W
R788	1-216-809-11	METAL CHIP	100	5%	1/10W
R789	1-216-809-11	METAL CHIP	100	5%	1/10W
R790	1-216-809-11	METAL CHIP	100	5%	1/10W
R792	1-216-864-11	SHORT CHIP	0		

AMP **CD**

Ref. No.	Part No.	Description			Remark
R793	1-216-841-11	METAL CHIP	47K	5%	1/10W
R802	1-216-813-11	METAL CHIP	220	5%	1/10W
R803	1-216-813-11	METAL CHIP	220	5%	1/10W
R804	1-216-813-11	METAL CHIP	220	5%	1/10W
R805	1-216-813-11	METAL CHIP	220	5%	1/10W
R807	1-216-837-11	METAL CHIP	22K	5%	1/10W
R808	1-216-801-11	METAL CHIP	22	5%	1/10W
R809	1-216-837-11	METAL CHIP	22K	5%	1/10W
		< VIBRATOR >			
X702	1-795-660-21	QUARTZ CRYSTAL UNIT (49.152 MHz)			
**********					
	A-1236-250-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C100	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C105	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C106	1-128-995-21	ELECT CHIP	100uF	20%	10V
C107	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C112	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C113	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C115	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C116	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C117	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C119	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C123	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C124	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C125	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C127	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C128	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C130	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C132	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C136	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C137	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C138	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C139	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C140	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C141	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C142	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C143	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C144	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C145	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C146	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C147	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C148	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C149	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C150	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C151	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C152	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-128-995-21	ELECT CHIP	100uF	20%	10V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C207	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C303	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C306	1-128-995-21	ELECT CHIP	100uF	20%	10V
C307	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C403	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN202	1-784-835-51	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	6-710-827-01	IC TC94A70FG-008 (S, D)			
IC201	6-710-808-01	IC TK63115SCL-G@GT			
IC401	6-710-637-01	IC BA5826SFP-E2			
		< TRANSISTOR >			
Q301	6-551-120-01	TRANSISTOR	2SA2119K		
		< RESISTOR/FERRITE BEAD >			
R101	1-216-813-11	METAL CHIP	220	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R104	1-216-295-00	SHORT CHIP	0		
R105	1-216-857-11	METAL CHIP	1M	5%	1/10W
R106	1-216-821-11	METAL CHIP	1K	5%	1/10W
R108	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W
R114	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-845-11	METAL CHIP	100K	5%	1/10W
R119	1-216-864-11	SHORT CHIP	0		
R121	1-216-809-11	METAL CHIP	100	5%	1/10W
R128	1-216-853-11	METAL CHIP	470K	5%	1/10W
R129	1-216-821-11	METAL CHIP	1K	5%	1/10W
R130	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-857-11	METAL CHIP	1M	5%	1/10W
R135	1-216-853-11	METAL CHIP	470K	5%	1/10W
R136	1-216-837-11	METAL CHIP	22K	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R140	1-216-864-11	SHORT CHIP	0		
R142	1-216-837-11	METAL CHIP	22K	5%	1/10W
R143	1-216-841-11	METAL CHIP	47K	5%	1/10W
R144	1-216-837-11	METAL CHIP	22K	5%	1/10W
R145	1-216-864-11	SHORT CHIP	0		
R146	1-216-864-11	SHORT CHIP	0		
R147	1-216-864-11	SHORT CHIP	0		
R148	1-216-864-11	SHORT CHIP	0		
R149	1-216-864-11	SHORT CHIP	0		
R150	1-216-864-11	SHORT CHIP	0		
R151	1-216-864-11	SHORT CHIP	0		
R153	1-216-857-11	METAL CHIP	1M	5%	1/10W
R154	1-216-857-11	METAL CHIP	1M	5%	1/10W
R155	1-216-805-11	METAL CHIP	47	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-00	SHORT CHIP	0		
R202	1-216-295-00	SHORT CHIP	0		
R203	1-216-809-11	METAL CHIP	100	5%	1/10W
R204	1-216-809-11	METAL CHIP	100	5%	1/10W
R205	1-216-809-11	METAL CHIP	100	5%	1/10W
R206	1-216-809-11	METAL CHIP	100	5%	1/10W
R207	1-216-809-11	METAL CHIP	100	5%	1/10W
R208	1-216-809-11	METAL CHIP	100	5%	1/10W
R209	1-216-809-11	METAL CHIP	100	5%	1/10W
R210	1-216-809-11	METAL CHIP	100	5%	1/10W
R211	1-216-809-11	METAL CHIP	100	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R213	1-216-809-11	METAL CHIP	100	5%	1/10W
R214	1-216-809-11	METAL CHIP	100	5%	1/10W
R216	1-216-809-11	METAL CHIP	100	5%	1/10W
R218	1-216-845-11	METAL CHIP	100K	5%	1/10W
R219	1-216-845-11	METAL CHIP	100K	5%	1/10W
R220	1-216-845-11	METAL CHIP	100K	5%	1/10W
R221	1-216-845-11	METAL CHIP	100K	5%	1/10W
R222	1-216-845-11	METAL CHIP	100K	5%	1/10W
R223	1-216-845-11	METAL CHIP	100K	5%	1/10W
R224	1-216-809-11	METAL CHIP	100	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-864-11	SHORT CHIP	0		
R303	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R304	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R405	1-216-833-11	METAL CHIP	10K	5%	1/10W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R414	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R415	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< VIBRATOR >			
X102	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)			

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	A-1243-276-A	FRONT PANEL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-165-621-11	CERAMIC CHIP	0.1uF		50V
C903	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C904	1-126-791-11	ELECT	10uF	20%	35V
C905	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C908	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C909	1-126-791-11	ELECT	10uF	20%	35V
C910	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C911	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C912	1-126-791-11	ELECT	10uF	20%	35V
C913	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C915	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C916	1-126-791-11	ELECT	10uF	20%	35V
C917	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C919	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C920	1-126-791-11	ELECT	10uF	20%	35V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C922	1-126-964-11	ELECT	10uF	20%	50V
C923	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C924	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C925	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C954	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C962	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D903	6-501-193-01	DIODE 1SS355WTE-17			
D905	6-501-579-01	DIODE MC2837			
D906	6-501-579-01	DIODE MC2837			
D907	6-501-579-01	DIODE MC2837			
D909	6-501-582-01	DIODE 1N4002-B5			
D951	6-501-483-01	LED SLR-325VCT31P (STANDBY)			
D952	8-719-061-96	LED SLR-325DCT31 (USB MEMORY)			
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-519-939-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-759-100-96	IC uPC4558G2			
IC951	6-600-349-31	IC NJL24H400A			
		< JUMPER RESISTOR >			
JR901	1-216-864-11	SHORT CHIP	0		
JR902	1-216-864-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q901	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q902	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q903	8-729-038-28	TRANSISTOR	RT1N441C-TP-1		
Q904	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q905	8-729-038-28	TRANSISTOR	RT1N441C-TP-1		
Q906	8-729-047-62	TRANSISTOR	2SC3440-T12-1F		
Q907	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF		
Q908	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q951	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q952	8-729-600-22	TRANSISTOR	2SA1235-F		
Q953	8-729-120-28	TRANSISTOR	2SC1623-L5L6		

FRONT PANEL **HEADPHONE** **MAIN**

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R901	1-216-841-11	METAL CHIP	47K	5%	1/10W
R902	1-216-845-11	METAL CHIP	100K	5%	1/10W
R903	1-216-841-11	METAL CHIP	47K	5%	1/10W
R904	1-216-845-11	METAL CHIP	100K	5%	1/10W
R905	1-216-841-11	METAL CHIP	47K	5%	1/10W
R906	1-216-821-11	METAL CHIP	1K	5%	1/10W
R907	1-216-821-11	METAL CHIP	1K	5%	1/10W
R908	1-216-797-11	METAL CHIP	10	5%	1/10W
R909	1-216-797-11	METAL CHIP	10	5%	1/10W
R910	1-216-833-11	METAL CHIP	10K	5%	1/10W
R911	1-216-833-11	METAL CHIP	10K	5%	1/10W
R917	1-216-837-11	METAL CHIP	22K	5%	1/10W
R918	1-216-813-11	METAL CHIP	220	5%	1/10W
R919	1-216-837-11	METAL CHIP	22K	5%	1/10W
R920	1-216-821-11	METAL CHIP	1K	5%	1/10W
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R923	1-216-821-11	METAL CHIP	1K	5%	1/10W
R924	1-216-841-11	METAL CHIP	47K	5%	1/10W
R926	1-216-841-11	METAL CHIP	47K	5%	1/10W
R927	1-216-821-11	METAL CHIP	1K	5%	1/10W
R928	1-216-833-11	METAL CHIP	10K	5%	1/10W
R929	1-216-833-11	METAL CHIP	10K	5%	1/10W
R930	1-216-833-11	METAL CHIP	10K	5%	1/10W
R933	1-216-837-11	METAL CHIP	22K	5%	1/10W
R934	1-216-837-11	METAL CHIP	22K	5%	1/10W
R935	1-216-821-11	METAL CHIP	1K	5%	1/10W
R936	1-216-833-11	METAL CHIP	10K	5%	1/10W
R937	1-216-833-11	METAL CHIP	10K	5%	1/10W
R940	1-216-805-11	METAL CHIP	47	5%	1/10W
R943	1-216-805-11	METAL CHIP	47	5%	1/10W
R944	1-216-833-11	METAL CHIP	10K	5%	1/10W
R945	1-216-833-11	METAL CHIP	10K	5%	1/10W
R947	1-216-817-11	METAL CHIP	470	5%	1/10W
R949	1-216-833-11	METAL CHIP	10K	5%	1/10W
R950	1-216-817-11	METAL CHIP	470	5%	1/10W
R951	1-216-821-11	METAL CHIP	1K	5%	1/10W
R953	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R954	1-216-809-11	METAL CHIP	100	5%	1/10W
R955	1-216-833-11	METAL CHIP	10K	5%	1/10W
R956	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R957	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R958	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R959	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R962	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R970	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R979	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R980	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R981	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R982	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R983	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R984	1-216-142-00	RES-CHIP	4.7	5%	1/8W
R989	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R990	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R991	1-216-821-11	METAL CHIP	1K	5%	1/10W
R992	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< ROTARY ENCODER >			
RV952	1-478-200-11	ENCODER, ROTARY (VOLUME)			
		< SWITCH >			
S951	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
S954	1-762-875-21	SWITCH, KEYBOARD (⏏)			
**********					
		HEADPHONE BOARD			
		**********			
		< CAPACITOR >			
C982	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C984	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C987	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C989	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C990	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C991	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C997	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C999	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
		< JUMPER RESISTOR >			
FB982	1-216-864-11	SHORT CHIP	0		
FB983	1-216-864-11	SHORT CHIP	0		
		< JACK >			
J981	1-815-629-21	JACK (AUDIO IN)			
J982	1-815-629-21	JACK (PHONES)			
		< RESISTOR >			
R931	1-216-821-11	METAL CHIP	1K	5%	1/10W
R932	1-216-845-11	METAL CHIP	100K	5%	1/10W
R941	1-216-821-11	METAL CHIP	1K	5%	1/10W
R942	1-216-845-11	METAL CHIP	100K	5%	1/10W
**********					
	A-1258-343-A	MAIN BOARD, COMPLETE (RU)			
	A-1258-358-A	MAIN BOARD, COMPLETE (E, E51, MX, AR)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C106	1-126-963-11	ELECT	4.7uF	20%	50V
C107	1-126-960-11	ELECT	1uF	20%	50V
C111	1-126-923-91	ELECT	220uF	20%	10V
C112	1-126-923-91	ELECT	220uF	20%	10V
C149	1-126-960-11	ELECT	1uF	20%	50V
C150	1-126-960-11	ELECT	1uF	20%	50V
C151	1-126-960-11	ELECT	1uF	20%	50V
C206	1-126-963-11	ELECT	4.7uF	20%	50V
C207	1-126-960-11	ELECT	1uF	20%	50V
C212	1-126-923-91	ELECT	220uF	20%	10V
C249	1-126-960-11	ELECT	1uF	20%	50V
C250	1-126-960-11	ELECT	1uF	20%	50V
C251	1-126-960-11	ELECT	1uF	20%	50V
C253	1-126-961-11	ELECT	2.2uF	20%	50V
C254	1-126-961-11	ELECT	2.2uF	20%	50V

Ref. No.	Part No.	Description			Remark
C256	1-130-494-11	MYLAR	0.082uF	5%	50V
C258	1-130-494-11	MYLAR	0.082uF	5%	50V
C260	1-130-494-11	MYLAR	0.082uF	5%	50V
C263	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C264	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C265	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C266	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C268	1-130-494-11	MYLAR	0.082uF	5%	50V
C269	1-126-964-11	ELECT	10uF	20%	50V
C301	1-126-768-11	ELECT	2200uF	20%	16V
C302	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C305	1-124-261-00	ELECT	10uF	20%	50V
C306	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-126-925-91	ELECT	470uF	20%	10V
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C317	1-126-916-11	ELECT	1000uF	20%	6.3V
C318	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C319	1-126-923-91	ELECT	220uF	20%	10V
C321	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C323	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C337	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C348	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C353	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C355	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C362	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C363	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C364	1-126-923-91	ELECT	220uF	20%	10V
C366	1-126-947-11	ELECT	47uF	20%	35V
C370	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C372	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C401	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN301	1-815-450-11	PIN, CONNECTOR (PWB) 9P			
CN302	1-784-778-11	CONNECTOR, FFC 17P			
CN304	1-819-130-11	PIN, CONNECTOR 2P			
CN305	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
CN306	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
CN308	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			
CN310	1-784-780-11	CONNECTOR, FFC 19P			
CN315	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CN318	1-568-828-11	CONNECTOR, FFC 9P			
CN320	1-779-542-21	CONNECTOR, FFC (LIF (NON-ZIF)) 5P			
CN321	1-815-443-11	PIN, CONNECTOR (PWB) 2P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D203	6-501-582-01	DIODE 1N4002-B5	
D205	6-501-582-01	DIODE 1N4002-B5	
D206	6-501-582-01	DIODE 1N4002-B5	
D207	6-501-582-01	DIODE 1N4002-B5	
D209	6-501-582-01	DIODE 1N4002-B5	
D210	6-501-193-01	DIODE 1SS355WTE-17	
D211	6-501-582-01	DIODE 1N4002-B5	
D212	6-501-582-01	DIODE 1N4002-B5	
D213	6-501-582-01	DIODE 1N4002-B5	
D217	6-501-193-01	DIODE 1SS355WTE-17	
D218	6-501-193-01	DIODE 1SS355WTE-17	
D219	6-501-193-01	DIODE 1SS355WTE-17	
D220	6-501-582-01	DIODE 1N4002-B5	
D221	6-501-582-01	DIODE 1N4002-B5	
		< EARTH TERMINAL >	
EP101	1-537-771-21	TERMINAL BOARD, GROUND	
EP102	1-537-771-21	TERMINAL BOARD, GROUND	
EP301	1-537-771-21	TERMINAL BOARD, GROUND	
		< IC/TRANSISTOR >	
IC301	6-807-625-01	IC M3062LFGPFP-711 (for SERVICE)	
IC302	6-701-680-01	IC PST3629NR	
IC304	6-710-289-01	IC R2S15904SP	
⚠IC305	6-700-830-01	IC KIA7809API	
⚠IC306	8-759-071-48	IC TA7807S	
⚠IC307	6-703-546-01	IC TA7804LS	
IC308	6-707-282-01	IC MM1615ANLE	
IC311	8-759-523-03	IC TC74HC4066AFT (EL)	
IC312	8-759-523-03	IC TC74HC4066AFT (EL)	
IC313	6-707-870-01	IC TC74VHC157FT (EKJ)	
IC315	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC316	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
IC317	8-759-656-83	IC NJM4580MD- (TE2)	
IC320	8-759-598-69	IC BA6956AN	
		< JUMPER RESISTOR >	
JR101	1-216-864-11	SHORT CHIP 0	
JR102	1-216-864-11	SHORT CHIP 0	
JR112	1-216-864-11	SHORT CHIP 0	
JR115	1-216-864-11	SHORT CHIP 0	
JR116	1-216-864-11	SHORT CHIP 0	
JR301	1-216-864-11	SHORT CHIP 0	
JR302	1-216-864-11	SHORT CHIP 0	
JR304	1-216-864-11	SHORT CHIP 0	
JR305	1-216-864-11	SHORT CHIP 0	
JR311	1-216-864-11	SHORT CHIP 0	
JR312	1-216-864-11	SHORT CHIP 0	
JR313	1-216-864-11	SHORT CHIP 0	
JR314	1-216-864-11	SHORT CHIP 0	
JR315	1-216-864-11	SHORT CHIP 0	
JR316	1-216-864-11	SHORT CHIP 0	
JR317	1-216-864-11	SHORT CHIP 0	
JR318	1-216-864-11	SHORT CHIP 0	
JR319	1-216-864-11	SHORT CHIP 0	
JR320	1-216-864-11	SHORT CHIP 0	
JR321	1-216-864-11	SHORT CHIP 0	

MAIN

Ref. No.	Part No.	Description			Remark
JR322	1-216-864-11	SHORT CHIP	0		
JR323	1-216-864-11	SHORT CHIP	0		
JR324	1-216-864-11	SHORT CHIP	0		
JR325	1-216-864-11	SHORT CHIP	0		
JR326	1-216-864-11	SHORT CHIP	0		
JR327	1-216-864-11	SHORT CHIP	0		
JR328	1-216-864-11	SHORT CHIP	0		
JR329	1-216-864-11	SHORT CHIP	0		
JR330	1-216-864-11	SHORT CHIP	0		
JR331	1-216-864-11	SHORT CHIP	0		
JR341	1-216-296-11	SHORT CHIP	0		
JR342	1-216-296-11	SHORT CHIP	0		
JR346	1-216-296-11	SHORT CHIP	0		
JR348	1-216-296-11	SHORT CHIP	0		
JR349	1-216-296-11	SHORT CHIP	0		
JR350	1-216-296-11	SHORT CHIP	0		
JR351	1-216-296-11	SHORT CHIP	0		
JR352	1-216-296-11	SHORT CHIP	0		
JR353	1-216-296-11	SHORT CHIP	0		
JR354	1-216-296-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q301	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q303	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q304	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
⚠Q305	8-729-036-89	TRANSISTOR	KTC3198GR-AT		
Q306	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q307	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
⚠Q312	8-729-037-13	TRANSISTOR	KTA1271Y		
Q313	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q321	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q325	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q326	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q327	8-729-037-13	TRANSISTOR	KTA1271Y		
Q329	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q330	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R101	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R102	1-216-841-11	METAL CHIP	47K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R107	1-216-841-11	METAL CHIP	47K	5%	1/10W
R108	1-216-813-11	METAL CHIP	220	5%	1/10W
R109	1-216-833-11	METAL CHIP	10K	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-845-11	METAL CHIP	100K	5%	1/10W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R115	1-216-837-11	METAL CHIP	22K	5%	1/10W
R116	1-216-805-11	METAL CHIP	47	5%	1/10W
R117	1-216-845-11	METAL CHIP	100K	5%	1/10W
R118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R127	1-216-837-11	METAL CHIP	22K	5%	1/10W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R135	1-216-841-11	METAL CHIP	47K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-841-11	METAL CHIP	47K	5%	1/10W
R203	1-216-821-11	METAL CHIP	1K	5%	1/10W
R207	1-216-841-11	METAL CHIP	47K	5%	1/10W
R208	1-216-813-11	METAL CHIP	220	5%	1/10W
R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R212	1-216-845-11	METAL CHIP	100K	5%	1/10W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R215	1-216-837-11	METAL CHIP	22K	5%	1/10W
R216	1-216-805-11	METAL CHIP	47	5%	1/10W
R217	1-216-845-11	METAL CHIP	100K	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R234	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R235	1-216-841-11	METAL CHIP	47K	5%	1/10W
R257	1-216-841-11	METAL CHIP	47K	5%	1/10W
R258	1-216-833-11	METAL CHIP	10K	5%	1/10W
R259	1-216-841-11	METAL CHIP	47K	5%	1/10W
R260	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-809-11	METAL CHIP	100	5%	1/10W
R304	1-216-809-11	METAL CHIP	100	5%	1/10W
R305	1-216-809-11	METAL CHIP	100	5%	1/10W
R306	1-216-809-11	METAL CHIP	100	5%	1/10W
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W
R311	1-216-849-11	METAL CHIP	220K	5%	1/10W
R313	1-216-864-11	SHORT CHIP	0		
R316	1-216-864-11	SHORT CHIP	0		
R319	1-216-809-11	METAL CHIP	100	5%	1/10W
R320	1-216-841-11	METAL CHIP	47K	5%	1/10W
R321	1-216-809-11	METAL CHIP	100	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-809-11	METAL CHIP	100	5%	1/10W
R326	1-216-809-11	METAL CHIP	100	5%	1/10W
R327	1-216-809-11	METAL CHIP	100	5%	1/10W
R328	1-216-809-11	METAL CHIP	100	5%	1/10W
R331	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-809-11	METAL CHIP	100	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-809-11	METAL CHIP	100	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-809-11	METAL CHIP	100	5%	1/10W
R338	1-216-809-11	METAL CHIP	100	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R341	1-216-817-11	METAL CHIP	470	5%	1/10W
R342	1-216-809-11	METAL CHIP	100	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-809-11	METAL CHIP	100	5%	1/10W
R346	1-216-833-11	METAL CHIP	10K	5%	1/10W
R347	1-216-841-11	METAL CHIP	47K	5%	1/10W
R348	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R349	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R366	1-216-864-11	SHORT CHIP	0		
R367	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R368	1-216-809-11	METAL CHIP	100	5%	1/10W
R369	1-216-809-11	METAL CHIP	100	5%	1/10W
R370	1-216-809-11	METAL CHIP	100	5%	1/10W
R371	1-216-817-11	METAL CHIP	470	5%	1/10W
R372	1-216-817-11	METAL CHIP	470	5%	1/10W
R373	1-216-817-11	METAL CHIP	470	5%	1/10W
R374	1-216-857-11	METAL CHIP	1M	5%	1/10W
R375	1-216-809-11	METAL CHIP	100	5%	1/10W
R376	1-216-809-11	METAL CHIP	100	5%	1/10W
R378	1-216-809-11	METAL CHIP	100	5%	1/10W
R380	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
R385	1-216-833-11	METAL CHIP	10K	5%	1/10W
R387	1-216-809-11	METAL CHIP	100	5%	1/10W
R388	1-216-809-11	METAL CHIP	100	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R396	1-216-833-11	METAL CHIP	10K	5%	1/10W
R398	1-216-841-11	METAL CHIP	47K	5%	1/10W
R399	1-216-817-11	METAL CHIP	470	5%	1/10W
R400	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-841-11	METAL CHIP	47K	5%	1/10W
R402	1-216-841-11	METAL CHIP	47K	5%	1/10W
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R418	1-216-864-11	SHORT CHIP	0		
R419	1-217-806-11	RES-CHIP	1	5%	1/8W
R420	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-845-11	METAL CHIP	100K	5%	1/10W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W
R423	1-216-837-11	METAL CHIP	22K	5%	1/10W
R432	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R433	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-833-11	METAL CHIP	10K	5%	1/10W
R435	1-216-837-11	METAL CHIP	22K	5%	1/10W
R441	1-216-833-11	METAL CHIP	10K	5%	1/10W
R446	1-216-833-11	METAL CHIP	10K	5%	1/10W
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-833-11	METAL CHIP	10K	5%	1/10W
R452	1-216-864-11	SHORT CHIP	0		
R453	1-216-864-11	SHORT CHIP	0		
R461	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R467	1-216-813-11	METAL CHIP	220	5%	1/10W (RU)

Ref. No.	Part No.	Description			Remark
R467	1-216-817-11	METAL CHIP	470	5%	1/10W (E, E51, MX, AR)
R468	1-216-833-11	METAL CHIP	10K	5%	1/10W
R469	1-216-833-11	METAL CHIP	10K	5%	1/10W
R481	1-216-833-11	METAL CHIP	10K	5%	1/10W
R482	1-216-833-11	METAL CHIP	10K	5%	1/10W
R483	1-216-833-11	METAL CHIP	10K	5%	1/10W
R489	1-216-864-11	SHORT CHIP	0		
R491	1-216-845-11	METAL CHIP	100K	5%	1/10W

< VIBRATOR >

X301	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X302	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			

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MOTOR BOARD

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< CONNECTOR >

CN001	1-815-412-11	CONNECTOR, FFC/FPC 5P			

< SWITCH >

S001	1-786-509-11	SWITCH, ROTARY (DISC TRAY OPEN/CLOSE DETECT)			

****

SPEAKER BOARD

****

< CAPACITOR >

C851	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C852	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C853	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C854	1-164-315-11	CERAMIC CHIP	470PF	5%	50V

< CONNECTOR >

CN850	1-819-145-11	PIN, CONNECTOR 3P			
CN870	1-819-144-11	PIN, CONNECTOR 2P			

< TERMINAL BOARD >

J860	1-537-114-21	TERMINAL BOARD (SPEAKER)			

****

SUB POWER BOARD

****

< CAPACITOR >

⚠C602	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
⚠C603	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
⚠C604	1-126-960-11	ELECT	1uF	20%	50V
C611	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C612	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
⚠C615	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C652	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C653	1-137-649-31	ELECT	220uF	20%	10V
C654	1-126-923-91	ELECT	220uF	20%	10V

SUB POWER **SWITCHING POWER**

Ref. No.	Part No.	Description			Remark
		< DIODE >			
⚠D602	8-719-073-23	DIODE ST02D-200TA			
⚠D603	6-500-567-31	DIODE 10ERB20-TB3			
⚠D604	6-500-567-31	DIODE 10ERB20-TB3			
		< IC >			
⚠IC601	6-708-726-01	IC MIP2F20MS1SO			
⚠IC650	6-705-280-01	IC FAN431AZXA			
		< COIL >			
⚠L602	1-412-525-31	INDUCTOR	10uH		
		< PHOTO COUPLER >			
⚠PH601	6-600-438-01	PHOTO COUPLER TLP421F (D4-GR)			
		< TRANSISTOR >			
⚠Q615	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
⚠R603	1-216-853-11	METAL CHIP	470K	5%	1/10W
⚠R604	1-249-401-11	CARBON	47	5%	1/4W F
⚠R605	1-216-835-11	METAL CHIP	15K	5%	1/10W
⚠R606	1-249-381-11	CARBON	1	5%	1/4W F
⚠R607	1-216-864-11	SHORT CHIP	0		
⚠R615	1-245-494-31	METAL	2.2M	2%	1/4W F
⚠R616	1-216-845-11	METAL CHIP	100K	5%	1/10W
⚠R617	1-216-864-11	SHORT CHIP	0		
⚠R618	1-245-494-31	METAL	2.2M	2%	1/4W F
⚠R619	1-216-849-11	METAL CHIP	220K	5%	1/10W
R651	1-216-821-11	METAL CHIP	1K	5%	1/10W
R652	1-216-817-11	METAL CHIP	470	5%	1/10W
R655	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R656	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R657	1-216-805-11	METAL CHIP	47	5%	1/10W
R658	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
		< TRANSFORMER >			
⚠T603	1-443-942-11	TRANSFORMER, DC-DC CONVERTER			
		< EARTH TERMINAL >			
* TK601	1-537-738-21	TERMINAL, EARTH			
**********					
	A-1258-367-A	SWITCHING POWER BOARD, COMPLETE			(E, E51)
	A-1258-572-A	SWITCHING POWER BOARD, COMPLETE			(AR, RU)
	A-1258-604-A	SWITCHING POWER BOARD, COMPLETE (MX)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
⚠C1	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C2	1-165-529-11	MYLAR	0.22uF	10	275V
⚠C4	1-112-876-51	CERAMIC	470PF	10%	250V (MX)

Ref. No.	Part No.	Description			Remark
⚠C4	1-119-886-51	CERAMIC	470PF	10%	250V (E, E51, AR, RU)
⚠C5	1-112-876-51	CERAMIC	470PF	10%	250V (MX)
⚠C5	1-119-886-51	CERAMIC	470PF	10%	250V (E, E51, AR, RU)
⚠C11	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (E, E51, MX)
⚠C11	1-100-923-21	ELECT	100uF	20%	450V (AR, RU)
⚠C12	1-100-858-11	ELECT (BLOCK)	390uF	20%	250V (E, E51, MX)
⚠C13	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C14	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
⚠C15	1-126-964-11	ELECT	10uF	20%	50V
⚠C16	1-126-963-11	ELECT	4.7uF	20%	50V
⚠C17	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
⚠C18	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
⚠C19	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
⚠C20	1-126-947-11	ELECT	47uF	20%	35V
⚠C21	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
⚠C22	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C23	1-107-824-11	CERAMIC	220PF	5%	1KV
⚠C24	1-165-610-11	FILM	33000PF	3%	800V
⚠C25	1-126-949-11	ELECT	220uF	20%	35V
C31	1-128-951-21	ELECT	2200uF	20%	16V
C32	1-137-806-21	ELECT	1800uF	20%	35V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C39	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
⚠C606	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C609	1-126-964-11	ELECT	10uF	20%	50V
C651	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
		< CONNECTOR >			
CN1	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
CN31	1-819-132-11	PIN, CONNECTOR 4P			
		< DIODE >			
⚠D1	8-719-077-77	DIODE D3SB60F3			
⚠D2	8-719-081-58	DIODE S2V60-TA (E, E51, MX)			
⚠D3	8-719-081-58	DIODE S2V60-TA (E, E51, MX)			
⚠D11	8-719-979-64	DIODE UF4005/23			
⚠D14	6-500-567-31	DIODE 10ERB20-TB3			
⚠D15	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D16	6-501-178-01	DIODE UDZW-TE17-15B			
⚠D17	8-719-060-48	DIODE RB751V-40TE-17			
⚠D31	8-719-510-09	DIODE D10SC6M			
⚠D32	6-501-518-01	DIODE RB085T-90			
D33	8-719-983-22	DIODE MTZJ-T-77-27A			
D652	6-501-179-01	DIODE UDZW-TE17-16B			
		< FUSE >			
⚠F1	1-576-232-51	FUSE (5A/250V)			
		< FERRITE BEAD >			
⚠FB11	1-410-397-21	FERRITE	1.1uH		

SWITCHING POWER **TOP PANEL (FUNCTION)** **TOP PANEL (PLAY)**

Ref. No.	Part No.	Description			Remark
		< FUSE HOLDER >			
FH1	1-533-233-31	FUSE HOLDER			
FH2	1-533-233-31	FUSE HOLDER			
		< IC >			
⚠IC11	6-707-749-01	IC CXD9841P			
		< CAPACITOR >			
JR30	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
JR31	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
JR32	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< IC LINK >			
⚠L601	1-576-669-42	IC LINK			
		< PHOTO COUPLER >			
⚠PH11	6-600-438-01	PHOTO COUPLER	TLP421F (D4-GR)		
⚠PH602	6-600-438-01	PHOTO COUPLER	TLP421F (D4-GR)		
		< TRANSISTOR >			
⚠Q11	6-551-302-11	FET	2SK3561		
⚠Q12	6-551-302-11	FET	2SK3561		
⚠Q601	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q650	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q651	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q652	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
⚠R2	1-219-512-11	METAL	2.2M	5%	1/2W F
⚠R3	1-219-759-11	METAL	1M	5%	1/2W F (E, E51)
⚠R4	1-219-759-11	METAL	1M	5%	1/2W F (E, E51)
R11	1-216-864-11	SHORT CHIP	0		
⚠R12	1-245-502-31	METAL	4.7M	2%	1/4W F
⚠R13	1-245-502-31	METAL	4.7M	2%	1/4W F
⚠R14	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
⚠R15	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
⚠R16	1-218-823-11	METAL CHIP	100	0.5%	1/10W
⚠R17	1-218-823-11	METAL CHIP	100	0.5%	1/10W
⚠R18	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R20	1-216-833-11	METAL CHIP	10K	5%	1/10W
⚠R22	1-249-417-11	CARBON	1K	5%	1/4W F
⚠R23	1-219-984-51	METAL	0.1	2%	2W F
⚠R24	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R25	1-247-694-11	CARBON	33	5%	1/4W F
⚠R27	1-216-797-11	METAL CHIP	10	5%	1/10W
⚠R29	1-216-797-11	METAL CHIP	10	5%	1/10W
R32	1-216-821-11	METAL CHIP	1K	5%	1/10W
R33	1-216-817-11	METAL CHIP	470	5%	1/10W
R41	1-216-845-11	METAL CHIP	100K	5%	1/10W
⚠R608	1-216-821-11	METAL CHIP	1K	5%	1/10W
⚠R609	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
⚠R610	1-218-905-11	METAL CHIP	270K	0.5%	1/10W
R653	1-216-833-11	METAL CHIP	10K	5%	1/10W
R654	1-216-841-11	METAL CHIP	47K	5%	1/10W
R659	1-216-821-11	METAL CHIP	1K	5%	1/10W
R660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R661	1-216-833-11	METAL CHIP	10K	5%	1/10W
R662	1-216-833-11	METAL CHIP	10K	5%	1/10W
R663	1-216-817-11	METAL CHIP	470	5%	1/10W
		< TRANSFORMER >			
⚠T1	1-445-048-21	TRANSFORMER, LINE FILTER (AR, RU)			
⚠T1	1-457-326-21	COIL, LINE FILTER (E, E51, MX)			
⚠T31	1-445-163-11	TRANSFORMER, CONVERTER			
		< THERMISTOR >			
⚠TH1	1-802-075-11	THERMISTOR, NTC (AR, RU)			
⚠TH1	1-805-901-11	THERMISTOR, NTC (E, E51, MX)			
⚠TH2	1-805-901-11	THERMISTOR, NTC (E, E51, MX)			
		< EARTH TERMINAL >			
* TK1	1-537-738-21	TERMINAL, EARTH			
* TK3	1-537-738-21	TERMINAL, EARTH			
		< VARISTOR >			
⚠VR001	1-805-481-21	VARISTOR (MX)			
⚠VR001	1-805-482-11	VARISTOR (E, E51, AR, RU)			
⚠VR002	1-802-094-21	VARISTOR (E, E51)			
⚠VR003	1-802-094-21	VARISTOR (E, E51)			
**********					
		TOP PANEL (FUNCTION) BOARD			
		**********			
		< CONNECTOR >			
CN905	1-784-727-11	CONNECTOR, FFC 5P			
		< RESISTOR >			
R971	1-216-821-11	METAL CHIP	1K	5%	1/10W
R972	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R973	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R974	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R975	1-216-833-11	METAL CHIP	10K	5%	1/10W
R976	1-216-864-11	SHORT CHIP	0		
		< SWITCH >			
S970	1-762-875-21	SWITCH, KEYBOARD (USB ▶II)			
S971	1-762-875-21	SWITCH, KEYBOARD (CD ▶II)			
S972	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)			
S973	1-762-875-21	SWITCH, KEYBOARD (AUDIO IN)			
S974	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
**********					
		TOP PANEL (PLAY) BOARD			
		**********			
		< CONNECTOR >			
CN907	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
		< RESISTOR >			
R952	1-216-841-11	METAL CHIP	47K	5%	1/10W
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W

TOP PANEL (PLAY) **USB**

Ref. No.	Part No.	Description			Remark
R961	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R963	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R965	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R966	1-216-833-11	METAL CHIP	10K	5%	1/10W
R967	1-216-837-11	METAL CHIP	22K	5%	1/10W
R977	1-216-837-11	METAL CHIP	22K	5%	1/10W
R978	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
S953	1-762-875-21	SWITCH, KEYBOARD (⏮ ◀◀, TUNE –)			
S961	1-762-875-21	SWITCH, KEYBOARD (DSGX)			
S962	1-762-875-21	SWITCH, KEYBOARD (ERASE)			
S963	1-762-875-21	SWITCH, KEYBOARD (CD-USB SYNC/REC1)			
S965	1-762-875-21	SWITCH, KEYBOARD (▶▶ ⏭, TUNE +)			
S966	1-762-875-21	SWITCH, KEYBOARD (SELECT FOLDER +)			
S967	1-762-875-21	SWITCH, KEYBOARD (ENTER)			
S968	1-762-875-21	SWITCH, KEYBOARD (SELECT FOLDER –)			
S975	1-762-875-21	SWITCH, KEYBOARD (■/CANCEL)			
S976	1-762-875-21	SWITCH, KEYBOARD (SEARCH)			
**********					
	A-1257-710-A	USB BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-124-779-00	ELECT CHIP	10uF	20%	16V
C903	1-124-779-00	ELECT CHIP	10uF	20%	16V
C904	1-124-779-00	ELECT CHIP	10uF	20%	16V
C905	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C908	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C909	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C910	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C912	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C913	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C914	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C915	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C916	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C917	1-100-354-21	ELECT CHIP	220uF	20%	6.3V
C918	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C920	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C922	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C930	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN902	1-794-548-21	CONNECTOR, USB (A) (USB)			
CN904	1-784-859-51	CONNECTOR, FFC (LIF (NON-ZIF)) 7P			
CN907	1-784-833-51	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CN908	1-770-469-21	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D901	6-501-579-01	DIODE MC2837			
D902	6-501-579-01	DIODE MC2837			
D905	6-501-579-01	DIODE MC2837			

Ref. No.	Part No.	Description			Remark
		< EARTH TERMINAL >			
EP901	1-537-771-21	TERMINAL BOARD, GROUND			
		< JUMPER RESISTOR >			
FB901	1-216-295-00	SHORT CHIP	0		
FB902	1-216-295-00	SHORT CHIP	0		
		< IC >			
IC901	6-807-284-01	IC TMP92CD28AFG-2CB4			
IC915	6-710-887-01	IC R5523N001B-TR-F			
IC921	6-704-832-01	IC IS61LV6416-10TLT			
		< JUMPER RESISTOR >			
JR902	1-216-295-00	SHORT CHIP	0		
		< COIL >			
L901	1-456-799-11	COIL, COMMON MODE CHOKE			
		< RESISTOR >			
R901	1-216-833-11	METAL CHIP	10K	5%	1/10W
R902	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R903	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R904	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R905	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R906	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R907	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R913	1-216-845-11	METAL CHIP	100K	5%	1/10W
R915	1-216-833-11	METAL CHIP	10K	5%	1/10W
R916	1-216-864-11	SHORT CHIP	0		
R917	1-216-864-11	SHORT CHIP	0		
R919	1-216-809-11	METAL CHIP	100	5%	1/10W
R920	1-216-833-11	METAL CHIP	10K	5%	1/10W
R921	1-216-845-11	METAL CHIP	100K	5%	1/10W
R922	1-216-845-11	METAL CHIP	100K	5%	1/10W
R923	1-216-802-11	METAL CHIP	27	5%	1/10W
R924	1-216-802-11	METAL CHIP	27	5%	1/10W
R925	1-216-835-11	METAL CHIP	15K	5%	1/10W
R926	1-216-835-11	METAL CHIP	15K	5%	1/10W
R928	1-216-864-11	SHORT CHIP	0		
R932	1-216-809-11	METAL CHIP	100	5%	1/10W
R933	1-216-864-11	SHORT CHIP	0		
R934	1-216-833-11	METAL CHIP	10K	5%	1/10W
R937	1-216-809-11	METAL CHIP	100	5%	1/10W
R938	1-216-809-11	METAL CHIP	100	5%	1/10W
R941	1-216-845-11	METAL CHIP	100K	5%	1/10W
R942	1-216-845-11	METAL CHIP	100K	5%	1/10W
R943	1-216-845-11	METAL CHIP	100K	5%	1/10W
R944	1-216-845-11	METAL CHIP	100K	5%	1/10W
R945	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R947	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R970	1-216-809-11	METAL CHIP	100	5%	1/10W
R971	1-216-809-11	METAL CHIP	100	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R973	1-216-809-11	METAL CHIP	100	5%	1/10W
R974	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R975	1-216-809-11	METAL CHIP	100	5%	1/10W
R976	1-216-809-11	METAL CHIP	100	5%	1/10W
R977	1-216-809-11	METAL CHIP	100	5%	1/10W
R978	1-216-809-11	METAL CHIP	100	5%	1/10W
R979	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-809-11	METAL CHIP	100	5%	1/10W
R982	1-216-809-11	METAL CHIP	100	5%	1/10W
R983	1-216-809-11	METAL CHIP	100	5%	1/10W
R984	1-216-809-11	METAL CHIP	100	5%	1/10W
R985	1-216-809-11	METAL CHIP	100	5%	1/10W
R986	1-216-809-11	METAL CHIP	100	5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB921	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB922	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB923	1-234-944-21	RES, NETWORK 47 (1005X4)			
RB924	1-234-944-21	RES, NETWORK 47 (1005X4)			
		< VIBRATOR >			
X901	1-813-931-21	VIBRATOR, CRYSTAL (9MHz)			
**********					
		USB POWER BOARD			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C324	1-128-952-31	ELECT	220uF	20%	25V
C325	1-128-951-21	ELECT	2200uF	20%	16V
C358	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D208	6-500-080-11	DIODE 21DQ04N-TA2B1			
		< IC >			
⚠IC319	6-710-940-01	IC SI-8008TFE			
		< JUMPER RESISTOR >			
JR360	1-216-296-11	SHORT CHIP	0		
JR361	1-216-296-11	SHORT CHIP	0		
		< COIL >			
L101	1-400-424-11	INDUCTOR	47uH		
		< RESISTOR >			
R307	1-216-845-11	METAL CHIP	100K	5%	1/10W
R314	1-216-821-11	METAL CHIP	1K	5%	1/10W
R315	1-216-864-11	SHORT CHIP	0		
R317	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R409	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
**********					
		VOLTAGE SELECTOR BOARD (E, E51)			
		**********			
		< CONNECTOR >			
CN3	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
⚠S1	1-762-753-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR)	
**********			
		MISCELLANEOUS	
		**********	
158	1-831-756-21	CABLE, FLEXIBLE FLAT (5 CORE)	
159	1-831-797-21	CABLE, FLEXIBLE FLAT (17 CORE)	
208	1-832-535-21	CABLE, FLEXIBLE FLAT (5 CORE)	
251	1-832-618-21	CABLE, FLEXIBLE FLAT (21 CORE)	
253	1-832-815-21	CABLE, FLEXIBLE FLAT (9 CORE)	
254	1-693-734-21	TUNER (FM/AM) (E, E51, MX, AR)	
254	1-693-735-11	TUNER (FM/AM) (RU)	
255	1-457-368-11	CORE, FERRITE (RU)	
⚠256	1-827-226-31	CORD, POWER (MX)	
⚠256	1-830-188-11	CORD, POWER (E, E51, RU)	
⚠256	1-832-227-11	CORD, POWER (AR)	
259	1-832-865-21	CABLE, FLEXIBLE FLAT (19 CORE)	
260	1-400-932-11	FILTER, CLAMP	
264	1-457-413-11	CORE, FERRITE (RU)	
301	A-1242-967-A	LOADING (BK) ASSY	
306	1-832-645-21	CABLE, FLEXIBLE FLAT (27 CORE)	
⚠351	A-4735-357-A	BASE ASSY, OP (KSM-213D)	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	
**********			
		ACCESSORY	
		**********	
⚠	1-569-008-22	ADAPTOR, CONVERSION 2P (E, E51)	

REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2007.03	New
1.1	2007.05	Change of MAIN, SWITCHING POWER and USB boards (Suffix-12) Change of FRONT PANEL, HEADPHONE, SPEAKER, SUB POWER, TOP PANEL (FUNCTION), TOP PANEL (PLAY) and XM REGULATOR boards (Suffix-12, -13, -14, -21, -22) Change of USB POWER board (Suffix-12, -13, -14, -21, -22) (SUPPLEMENT-1) Change of MAIN and SWITCHING POWER boards (Suffix-13, -14, -21, -22) (SUPPLEMENT-1) (ECN-ECC19334/ECC20245/ECC20290/ECC22793)
1.2	2007.06	Addition of Singapore model to HCD-HX5 Addition of FRONT PANEL, HEADPHONE, SPEAKER, SUB POWER, TOP PANEL (FUNCTION) and TOP PANEL (PLAY) boards for Singapore model of HCD-HX5 Addition of SWITCHING POWER and USB POWER boards for Singapore model of HCD-HX5 (SUPPLEMENT-1) Printed wiring board, schematic diagrams and electrical parts list of MAIN board (for Singapore model of HCD-HX5) (SUPPLEMENT-2) Addition of HCD-HX3 (E, Mexican, Chilean, Peruvian, Argentina and Russian models) for CMT-HX3R (SUPPLEMENT-2)